LG Innotek

For further information, please visit LED.lginnotek.com

LED Lighting

Product Catalogue 2015

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LG Innotek

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About LG Innotek

Corporate Overview

LG Innotek aims to become the partner of choice to its customers by providing the best possible customer value. Its six business domains range from materials and components to modules(Mobile, Automotive, LED, Display, Semiconductor and IoT), contributing to both forward and backward industries and to the growth of its client companies. Since its establishment, LG Innotek has devoted itself to technology R&D and effective market penetration to secure cutting-edge technologies and marketing power.

As a result, LG Innotek has firmly established itself as a globally competitive company. In fact, LG Innotek has sustained a sound growth rate of growth averaging 15 percent over the past four years. On top of that, the company has successfully expanded into new businesses, completing a sustainable business portfolio to maintain its leadership in the cutting-edge materials/components market by creating the highest customer value.

Establishment
August 22, 1970

CEO
Lee, Ung Beom

Global Network
(Sales Offices & Subsidiaries)
Domestic: 6 / Overseas: 17

Website
www.lginnotek.com
LED.lginnotek.com

Business Area

Mobile
- Camera Module
- Touch Panel
- PCB (Build-up, RFPCB)
- Wireless Power Charger
- LED Flash / LED Package (BLU)

Automotive
- Motor & Sensor
- Connectivity & ADAS
- For xEV
- Wireless Power Charger
- Touch Panel
- PCB
- Thermoelectric Module
- LED Lighting

LED
- Mobile/Display
- Automotive
- LED Lighting
- UV LED

Display
- Photo Mask
- Digital Tuner
- Wi-Fi Module
- Smart TV Camera
- LED BLU

IoT
- Mobile Router
- IP Network Camera
- Wireless Modem (3G/4G)
- Real Time Location System
- Electronic Shelf Label

Semiconductor
- Flip Chip CSP
- SiP
- COF
- COB (Smart IC)

Global Network

Domestic : 5 Workplaces, 1 Main R&D Center
Overseas : 6 Production Subsidiaries, 10 Sales Subsidiaries &Offices, 1 Subsidiary & R&D Center

Sales Offices

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  Tel : +49-69-47861-6310
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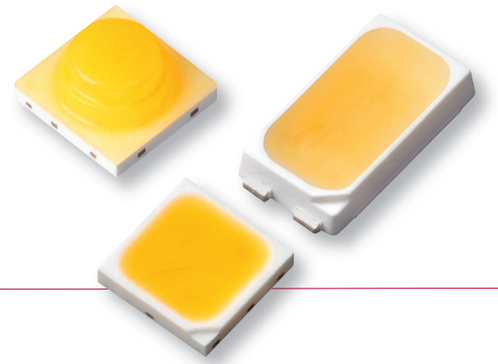
  Email : patrickkang@lginnotek.com

Package_ Mid Power



5152 Series

5630 Series

6030 Series

7030 Series

3030N Series

3030S Series

5152 Series

LM80

Features

- **Size(LxWxH):** 5.1x5.2x0.9mm
- **Viewing Angle:** 120˚
- **LM80 Certified at 200mA, 105˚C**
- **Junction Temperature:** 120℃
- **Thermal Resistance:** 15˚ C/W

Specifications

Category	Part Number	CCT (K)	Forward Voltage (V)	Forward Current (mA)	Luminous Flux (lm)	Maximum Current (mA)	CRI
5152 R	LEMWS51R80HZ21xx	5000	2.7~3.0	65	28	150	80
	LEMWS51R80LZ31xx	3000			25.8		
5152 G2	LEMWS51R80HZ2Axx	5000	2.7~3.0	65	31.3	150	80
	LEMWS51R80LZ3Axx	3000			29.1		
5152 G3	LEMWS51R80HZ2Bxx	5000	2.7~3.0	65	33.3	150	80
	LEMWS51R80LZ3Bxx	3000			31		

5630 Series

LM80 High CRI

Features

- **Size(LxWxH):** 5.6x3.0x0.9mm
- **Viewing Angle:** 120˚
- **LM80 Certified at 200mA, 105℃**
- **Junction Temperature:** 110℃
- **Thermal Resistance:** 15˚ C/W

Specifications

Category	Part Number	CCT (K)	Forward Voltage (V)	Forward Current (mA)	Luminous Flux (lm)	Maximum Current (mA)	CRI
5630 Q	LEMWS59Q80HZxxxx	5000	2.8~3.2	65	25	150	80
	LEMWS59Q80LZxxxx	3000			23		
5630 Q'	LEHWS59R80HZxxxx	5000	2.8~3.2	65	28.2	150	80
	LEHWS59R80LZxxxx	3000			25.8		
5630 G2	LEMWS59R80HZ2Axx	5000	2.7~3.0	65	31.3	200	80
	LEMWS59R80LZ3Axx	3000			29.1		
5630 G3	LEMWS59R80HZ2Bxx	5000	2.7~3.0	65	33.3	200	80
	LEMWS59R80LZ3Bxx	3000			31		
NEW 5630 G4	LEMWS59R80HZ2Dxx	5000	2.7~3.0	65	34.9	200	80
	LEMWS59R80LZ3Dxx	3000			32.6		
High CRI	LEMWS59R80HZ2xxx	5000	2.7~3.0	65	28.5	200	90
	LEMWS59R80LZ3xxx	3000			24.9		

6030 Series

LM80

Features

- **Size(LxWxH):** 6.0x3.0x0.8mm
- **Viewing Angle:** 118˚
- **LM80 Certified at 240mA, 105℃**
- **Junction Temperature:** 110℃
- **Thermal Resistance:** 12˚ C/W

Specifications

Category	Part Number	CCT (K)	Forward Voltage (V)	Forward Current (mA)	Luminous Flux (lm)	Maximum Current (mA)	CRI
G1	LEMWS68T80HZxxxx	5000	2.8~3.2	130	52.8	240	80
	LEMWS68T80LZxxxx	3000			48.4		

7030 Series

LM80

Features

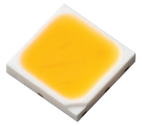
- **Size(LxWxH):** 7.0x3.0x0.9mm
- **Viewing Angle:** 115˚
- **LM80 Certified at 280mA, 105℃**
- **Junction Temperature:** 110℃
- **Thermal Resistance:** 12˚ C/W

Specifications

Category	Part Number	CCT (K)	Forward Voltage (V)	Forward Current (mA)	Luminous Flux (lm)	Maximum Current (mA)	CRI
G1	LEMWS73V80HZxxxx	5000	2.8~3.2	200	84.6	280	80
	LEMWS73V80LZxxxx	3000			79.6		

Package_ Mid Power

3030N Series



LM80 High CRI

Features

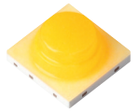
- **Size(LxWxH):** 3.0x3.0x0.6mm
- **Viewing Angle:** 120˚
- **LM80 Certified at 200mA, 105℃**
- **Junction Temperature:** 120℃
- **Thermal Resistance:** 7.5˚ C/W

Specifications

Category	Part Number	CCT (K)	Forward Voltage (V)	Forward Current (mA)	Luminous Flux (lm)	Maximum Current (mA)	CRI
G1	LEMWS36X80HZ21xx	5000	5.8~6.6	150	122.6	200	80
	LEMWS36X80LZ31xx	3000			112.8		
G2	LEMWS36X80HZ2Axx	5000	5.8~6.6	150	130	200	80
NEW	LEMWS36X80LZ3Axx	3000			119.6		
	Under Development	5000	5.8~6.6	150	137	200	70
		3000			126		
High CRI	Under Development	5000	5.8~6.6	150	110.5	200	90
NEW		3000			102		

Package_ Mid Power

3030S Series



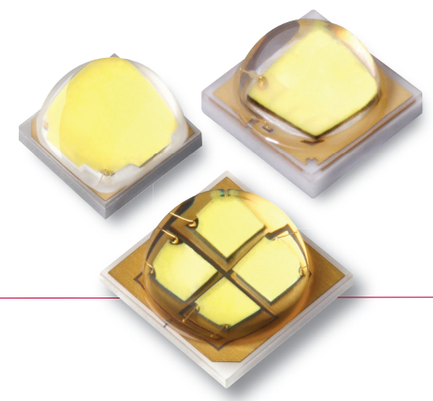
IN

Features

- **Size(LxWxH):** 3.0x3.0x1.6mm
- **Viewing Angle:** 160˚
- **LM80 in Progress at 200mA, 105℃**
- **Junction Temperature:** 120℃
- **Thermal Resistance:** 7.2˚ C/W

Specifications

Category	Part Number	CCT (K)	Forward Voltage (V)	Forward Current (mA)	Luminous Flux (lm)	Maximum Current (mA)	CRI
G1	LEMWS36X80HL	5000	6.23	150	139	200	80
NEW	LEMWS36X80LL	3000			133.9		



Package_ High Power

H35A0 Series

H35F0 Series

H35C Series

H70E0 Series

CSP Series

H35A0 Series

LM80

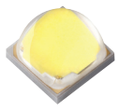
Features

- **Size(LxWxH):** 3.4x3.4x2.09mm
- **Viewing Angle:** 108˚
- **LM80 Certified at 700mA, 105℃**
- **Junction Temperature:** 150℃
- **Thermal Resistance:** 7.5℃/W

Specifications

Category	Part Number	CCT (K)	Forward Voltage (V)	Forward Current (mA)	Luminous Flux (lm)	Maximum Current (mA)	CRI
H35A0 (3535 1W)	LEMWA31X70HW10x0	5000	2.9~3.2	350	139	1,000	70
	LEMWA31X80LW30x0	3000			107		80

H35F0 Series



IN

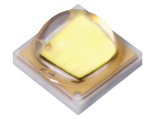
Features

- **Size(LxWxH):** 3.45x3.45x2.62mm
- **Viewing Angle:** 125˚
- **LM80 in Progress at 2,000mA, 105℃**
- **Junction Temperature:** 150℃
- **Thermal Resistance:** 2.5˚ C/W

Specifications

Category	Part Number	CCT (K)	Forward Voltage (V)	Forward Current (mA)	Luminous Flux (lm)	Maximum Current (mA)	CRI
NEW H35F0 (3535 G4L)	LEMWE33X70HX10x0	5000	2.8~3.2	1,050	500	3,000	70
	LEMWE33X70LX30x0	3000			455		
	LEMWE33X80HX10x0	5000	2.8~3.2	1,050	470	3,000	80
	LEMWE33X80LX30x0	3000			425		

H35C Series



LM80

Features

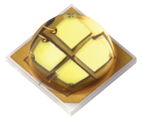
- **Size(LxWxH):** H35C0: 3.4x3.4x2.09mm
  H35C1/H35C2: 3.4x3.4x2.37mm
- **Viewing Angle:** 120˚
- **Junction Temperature:** 150℃
- **Thermal Resistance:** 6℃/W
- **LM80 Certified at 1,250mA, 105℃**

Specifications

Category	Part Number	CCT (K)	Forward Voltage (V)	Forward Current (mA)	Luminous Flux (lm)	Maximum Current (mA)	CRI
H35C0 (3515 G1)	LEMWA33X70HW10xA	5000	2.9~3.2	350	152	1,500	70
	LEMWA33X80LW30xA	3000			125		80
H35C1 (3535 G2)	LEMWA33X70HX10x0	5000	2.8~3.2	350	162	1,500	70
	LEMWA33X70LX30x0	3000			142		
	LEMWA33X80HX10x0	5000	2.8~3.2	350	150	1,500	80
	LEMWA33X80LX30x0	3000			131		
	LEMWA33X90HX10x0	4000	2.8~3.2	350	135	1,500	90
	LEMWA33X90LX30x0	3000			119		
NEW H35C2 (3535 G4)	LEMWA33X70HX10xA	5000	2.8~3.2	350	170	1,500	70
	LEMWA33X70LX30xA	3000			148		
	LEMWA33X80HX10xA	5000	2.8~3.2	350	158	1,500	80
	LEMWA33X80LX30xA	3000			145		
	LEMWA33X90HX10xA	4000	2.8~3.2	350	142	1,500	90
	LEMWA33X90LX30xA	3000			125		

Package_ High Power

H70E0 Series



IN

Features

- **Size(LxWxH):** 7.0x7.0x3.88mm
- **Viewing Angle:** 135˚
- **LM80 in Progress at 700mA, 105℃**
- **Junction Temperature:** 150℃
- **Thermal Resistance:** 6˚ C/W

Specifications

Category	Part Number	CCT (K)	Forward Voltage (V)	Forward Current (mA)	Luminous Flux (lm)	Maximum Current (mA)	CRI
NEW 7070	LEMWA77670HX10x0	5000	11.0~12.5	700	1,210	1,250	70
	LEMWA77680LX30x0	3000			971		80

Package_ High Power

CSP* Series (*Chip Scale Package)

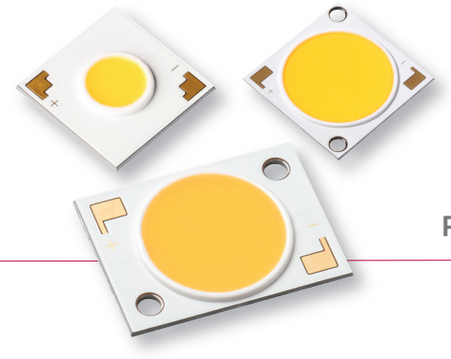
Concept

Features

- **Size(LxWxH):** 1.5x1.5x0.55mm
  1.8x1.8x0.55mm
- **Concept Product**
- **Junction Temperature:** 145℃

Specifications

Product	Category	Part Number	CCT (K)	Forward Voltage (V)	Forward Current (mA)	Luminous Flux (lm)	Maximum Current (mA)	CRI
Concept CSP	1515	Under Development	4000	2.8~3.2	350	155	700	80
	1818	Under Development	4000	2.8~3.2	350	161	900	80



Package_ COB (Chip On Board)

4W COB Series (Small LES)

7W COB Series (Small LES)

10W, 13W, 17W, 24W COB Series

40W COB Series

60W COB Series

4W COB Series (Small LES)

LM80 High CRI

Features

- **Size(LxWxH):** 14x14x1.45mm
  LES: 8.5mm Small LES: 6.5mm
- **Viewing Angle:** 115˚
- **Junction Temperature:** 150℃
- **Thermal Resistance:** 3.5℃/W
- **LM80 Certified at 173mA, 105℃**

Specifications

Category	Part Number	CCT (K)	Forward Voltage (V)	Forward Current (mA)	Luminous Flux (lm)	Maximum Current (mA)	CRI
G1	LEMWM11375HZxx	5000	9~10	400	448	500	80
	LEMWM11380LZxx	3000			430		
Small LES	LEMWM16380HZxx	5000	34 ~ 38	105	507	210	80
	LEMWM16380LZxx	3000			471		

7W COB Series (Small LES)

LM80 High CRI

Features

- **Size(LxWxH):** 14x14x1.45mm
  LES: 9.5mm Small LES: 6.5mm
- **Viewing Angle:** 115˚
- **Junction Temperature:** 150℃
- **Thermal Resistance:** 2.7℃/W
- **LM80 Certified at 346mA, 105℃**

Specifications

Category	Part Number	CCT (K)	Forward Voltage (V)	Forward Current (mA)	Luminous Flux (lm)	Maximum Current (mA)	CRI
G2	LEMWM11580HZxx	5000	34~38	195	927	390	80
	LEMWM11580LZxx	3000			878		
Small LES	LEMWM16480HZxx	5000	34 ~ 38	195	877	390	80
	LEMWM16480LZxx	3000			814		

10W, 13W, 17W, 24W COB Series

LM80 High CRI

Features

- **Size(LxWxH):** 18x24.4x1.45mm
  LES: 14.5mm
- **Viewing Angle:** 116˚
- **Junction Temperature:** 150℃ (24W: 140℃)
- **Thermal Resistance:** 1.7/1.3/1.1/0.9˚ C/W
  (10/13/17/24W)
- **LM80 Certified at 520mA(10W) / 680mA(13W) / 940mA(17W) / 1,280mA(24W), 105℃**

Specifications

Category	Part Number	CCT (K)	Forward Voltage (V)	Forward Current (mA)	Luminous Flux (lm)	Maximum Current (mA)	CRI
10W G2	LEMWM18580HGxx	5000	34~38	260	1,318	520	80
	LEMWM18580LGxx	3000			1,224		
13W G2	LEMWM18680HGxx	5000	34 ~ 38	340	1,694	680	80
	LEMWM18680LGxx	3000			1,571		
17W G2	LEMWM18780HGxx	5000	34~38	470	2,265	940	80
	LEMWM18780LGxx	3000			2,097		
24W G2	LEMWM18880HGxx	5000	34 ~ 38	640	3,024	1,280	80
	LEMWM18880LGxx	3000			2,787		

Package_ COB

40W COB Series

LM80

High CRI

Features

- **Size(LxWxH):** 28x28x1.45mm
  LES: 22mm
- **Viewing Angle:** 116˚
- **Junction Temperature:** 140℃
- **Thermal Resistance:** 0.6℃/W
- **LM80 Certified at 2,080mA, 105℃**

Specifications

Category	Part Number	CCT (K)	Forward Voltage (V)	Forward Current (mA)	Luminous Flux (lm)	Maximum Current (mA)	CRI
G2	LEMWM28C80HZxx	5000	34~38	1040	5,140	2,080	80
	LEMWM28C80LZxx	3000			4,755		

Package_ COB

60W COB Series

LM80

High CRI

Features

- **Size(LxWxH):** 28x28x1.45mm
  LES: 22mm
- **Viewing Angle:** 116˚
- **Junction Temperature:** 140℃
- **Thermal Resistance:** 0.4℃/W
- **LM80 Certified at 2,080mA, 105℃**

Specifications

Category	Part Number	CCT (K)	Forward Voltage (V)	Forward Current (mA)	Luminous Flux (lm)	Maximum Current (mA)	CRI
G2	LEMWM28Z80HZxx	5000	52~56	1040	7,776	2,080	80
	LEMWM28Z80LZxx	3000			7,290		

Package_ High Voltage

5250HV Series

5630HV Series

3030N HV Series

3030S HV Series

5250 HV Series

LM80

Features

- **Size(LxWxH):** 5.2x5.0x0.9mm
- **Viewing Angle:** 120˚
- **LM80 Certified at 42mA (32V), 20mA (67V) 105℃**
- **Junction Temperature:** 125℃
- **Thermal Resistance:** 14℃/W

Specifications

Category	Part Number	CCT (K)	Forward Voltage (V)	Forward Current (mA)	Luminous Flux (lm)	Maximum Current (mA)	CRI
32V	LEHWH51W80HHxx	5000	29.5~34.5	42	177	50	80
	LEHWH51W80LHxx	3000			163		
67V	LEHWH51Y80HHxx	5000	68.5~69.5	20	167	25	80
	LEHWH51Y80LHxx	3000			155		

5630 HV Series

LM80

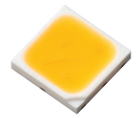
Features

- **Size(LxWxH):** 5.6x3.0x0.9mm
- **Viewing Angle:** 120˚
- **LM80 Certified at 25mA, 105℃**
- **Junction Temperature:** 125℃
- **Thermal Resistance:** 14℃/W

Specifications

Category	Part Number	CCT (K)	Forward Voltage (V)	Forward Current (mA)	Luminous Flux (lm)	Maximum Current (mA)	CRI
22V	LEHWH59280HHxx	5000	20~24	20	60.5	25	80
	LEHWH59280LHxx	3000			57		

3030N HV Series



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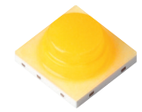
Features

- **Size(LxWxH):** 3.0x3.0x0.6mm
- **Viewing Angle:** 120˚
- **LM80 in Progress at 42mA (32V), 20mA (67V) 105℃**
- **Junction Temperature:** 125℃
- **Thermal Resistance:** 15℃/W(67V), 17℃/W(32V)

Specifications

Category	Part Number	CCT (K)	Forward Voltage (V)	Forward Current (mA)	Luminous Flux (lm)	Maximum Current (mA)	CRI
32V	LEHWH36380HHxx	5000	29.5~34.5	42	162	50	80
	LEHWH36380LHxx	3000			145		
67V	LEHWH36680HHxx	5000	63.0~71.5	20	158	25	80
	LEHWH36680LHxx	3000			137		

3030S HV Series



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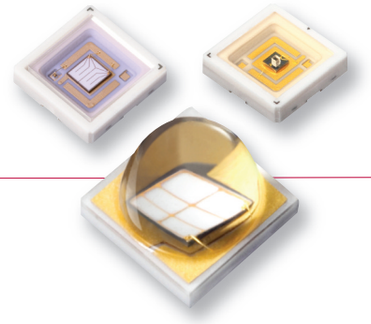
Features

- **Size(LxWxH):** 3.0x3.0x1.6mm
- **Viewing Angle:** 160˚
- **LM80 in Progress at 40mA, 105℃**
- **Junction Temperature:** 125℃
- **Thermal Resistance:** 14˚ C/W

Specifications

Category	Part Number	CCT (K)	Forward Voltage (V)	Forward Current (mA)	Luminous Flux (lm)	Maximum Current (mA)	CRI
NEW 22V	LEHWH30380HHxx	5000	22	40	111	50	80
	LEHWH30380LLxx	3000			103		

Package_ UV LED



UV-A Package

UV-C Package

UV-A Package

Features

- **High Performance UV-A LED Packages**
- **Application:** Curing System, Exposure Machine, Photo Catalysis

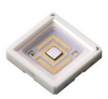
3528 1in1Series

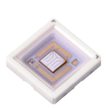
Category	Part Number	Optic Characteristics		Forward Current (mA)	Forward Voltage (V)	Beam Angle (Degree)	Rth (Tj-s)
		Wavelength (nm)	Optical Power (mW)				
3528 1in1	LEUVS33G10TZ00	385	11	20	3.4	130	48.3

3535 1in1 Series

Category	Part Number	Optic Characteristics		Forward Current (mA)	Forward Voltage (V)	Beam Angle (Degree)	Rth (Tj-s)
		Wavelength (nm)	Optical Power (mW)				
3535 1in1 Normal	LEUVA33T00RL00	365	800	500	3.6	120	4.5
	LEUVA33U70TL00	385	910		3.5	130	
	LEUVA33U70UL00	395	1,000				
	LEUVA33T00VL00	405	1,000				
3535 1in1 Narrow	LEUVA35T01RL00	365	875	500	3.6	45	4.5
	LEUVA35T01TL00	385	1,000		3.5	55	
	LEUVA35T01UL00	395	1,000				
	LEUVA35T01VL00	405	1,000				

6060 1in1 Series





Category	Part Number	Optic Characteristics		Forward Current (mA)	Forward Voltage (V)	Beam Angle (Degree)	Rth (Tj-s)
		Wavelength (nm)	Optical Power (mW)				
6060 1in1 G1	LEUVA66R40RV00	365	670	500	3.6	115	4.5
		385	910	700			
	LEUVA66U00TV00	395	800	500	3.5		
		405	1,080	700			
	LEUVA66U40VV00	365	800	500			
		385	1,080	700			
	LEUVA66R40VV00	395	800	500			
		405	1,080	700			
6060 1in1 H1	LEUVA66X00RV00	365	2,060	1,500	3.7	120	4.3
	LEUVA66X00TV00	385	2,230		3.6		5
	LEUVA66X00UV00	395	2,230				
	TBD	405	2,230				

UV-A Package

6868 4 in1 Series

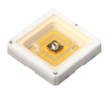
Category	Part Number	Optic Characteristics		Forward Current (mA)	Forward Voltage (V)	Beam Angle (Degree)	Rth (Tj-s)
		Wavelength (nm)	Optical Power (mW)				
6868 4 in1	LEUVA77X40RV00	365	2,700	500	14.9	115	1.5
			3,670	700			
	LEUVA77Z10TV00	385	3,200	500	14.8	110	2
			4,350	700			
	LEUVA77Z30UV00	395	3,200	500			
			4,350	700			
	LEUVA77X40W00	405	3,200	500			
			4,350	700			

UV-C Package

Features

- **High Efficient UV-C LED Packages**
- **Application:** Air/Water Purification, Air/Water Sterilization

6060 1in1Series



Category	Part Number	Optic Characteristics		Forward Current (mA)	Forward Voltage (V)	Beam Angle (Degree)	Rth (Tj-s)
		Wavelength (nm)	Optical Power (mW)				
6060 1in1	LEUVA66B00HF00	278	2	20	6.3	120	37

6868 1in1Series

Category	Part Number	Optic Characteristics		Forward Current (mA)	Forward Voltage (V)	Beam Angle (Degree)	Rth (Tj-s)
		Wavelength (nm)	Optical Power (mW)				
6868 1in1	LEUVA77G00HF00	275	10	100	6.5	124	32

Solution Partners

Optical Solutions

Optic

BOEIM	BOEIM	AnyCasting	Any Casting
KHATOD	KHATOD Optoelectronics	FRAEN	Fraen Optics
LedLink	LedLink	BICOM	BICOM
LEDiL	LEDiL	carclo Optics	Carclo - Optics
Widegerm	Widegerm Lighting Ltd.	SMT	SMT
lednlight	LEDnLight		

Thermal Solutions

Heat sink

NUVENTIX	Nuventix	Widegerm	Widegerm
UNIQUEST	Uniquest	SUNON	Sunon
MTX MechaTronix	Mecha Tronix	CeramTec	CeramTec
Coolone	Coolone	ATS	Advenced Thermal Solutions
fischerelektronik	Fisher Elektronik	sarnikon	Sarnikon
东莞智富五金制品有限公司	Wisefull		

TIM

COOLTTM	TTM	THE BERGQUIST COMPANY	The Bergquist Company
Laird TECHNOLOGIES	Laird Technologies	DOW CORNING	Dow Corning
t-global	T-Global Technology	SILICONE VALLEY	Silicone Valley
MOMENTIVE	Momentive		

Electrical Solutions

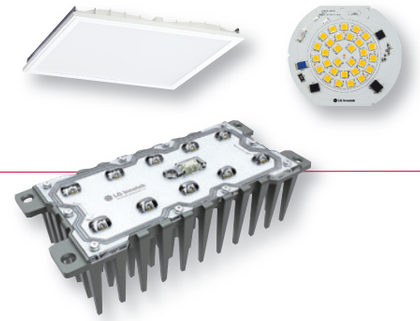
Holder

AAG.STUCCHI Essential for lighting	AAG.STUCCHI	TE connectivity	TE Connectivity
BJB	BJB	IDEAL	Ideal Industries
molex	Molex	LUMIGEAR	Shangyoulighting
BENDER +WIRTH	Bender+Wirth	DARKOO	Darkoo

Driver

ORIENTECH	Orientech	PHIHONG	Phihong
Silicon Works	Silicon Works	TenPao	Tenpao Group International Limited
dd	Dongdo Electronics	MagnaChip	Magna Chip
IML	IML		

Module · Engine



AC Direct Module

Flat Light Array

ReflectA Free

Eagle Eye

Outdoor Square Module

AC Direct Module

Bulb Module

Features

- High Reliable Performance
- Surge Protection Board Included
- High EMI Protection

6W 9W 12W

Specifications

Type	Model Number	CCT(K)	Luminous Flux (lm)	Module Efficacy (lm/W)	CRI	Power Consumption(W)	Input Voltage (V)	Module Size (mm)
Bulb	LLBML04-06C601A	5000	600	105	80	6	220	ø48
	LLBML04-06C201A	3000	540	95				
	LLBML04-09C601A	5000	900	106	80	9	220	ø48
	LLBML04-09C201A	3000	810	95				
	LLBML04-12C601A	5000	1,200	104	80	12	220	ø48
	LLBML04-12C201A	3000	1,080	94				

Downlight Module

Features

- Easy Installation (Connect type)
- Improvement of Light Uniformity
- High Surge Protection(1.5kV)

850lm 1150lm 2300lm

Specifications

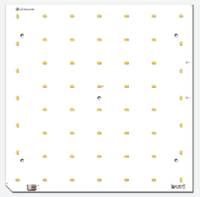
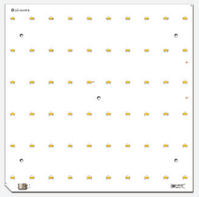
Type	Model Number	CCT(K)	Luminous Flux (lm)	Module Efficacy (lm/W)	CRI	Power Consumption(W)	Input Voltage (V)	Module Size (mm)
Downlight	LLDMLR6-00A601x	5000	960	108	80	9	120/220	ø65
	LLDMLR6-00A201x	3000	850	96				
	LLDMLR7-10A601x	5000	1,360	112	80	12	120/220	ø72
	LLDMLR7-10A201x	3000	1,180	98				
	LLDMLR9-20A601x	5000	2,750	117	80	23	120/220	ø88
	LLDMLR9-20A201x	3000	2,450	104				

Flat Light Array

Features

- LED Reliability (Lifetime of 50,000hrs, LM80)
- Future-proof
  : Interchangeability through Global Standard Form Factor
- Design Flexibility
- Quality of Light (>CRI 80, 3SDCM)
- CCT : 3000K, 4000K, 5000K

Product Line-up

Form Factor	Size (mm)	Type	Product / Luminous Flux
Linear	280x20	CELM-1	 1100lm
		CELM-2	 800lm
	280x40	CELM-3	 1100lm
		CELM-4	 1200lm
	560x40	CELM-5	 2500lm
Square	270x270	CESM-1	 1500lm (SM-1)
		CESM-2	 4000lm (SM-2)

Specifications

Form Factor	Size	Model Number	CCT (K)	Luminous Flux (lm)	Module Efficacy (lm/W)	CRI	Power Consumption (W)	Input Current (mA)	Input Voltage (V)
Linear	CELM-1	LLFML31-11K601C	5000	1,080	110	>80	10	380	25.6
		LLFML31-11K401C	4000	1,080	110				
		LLFML31-11K301C	3500	1,040	105				
		LLFML31-11K201C	3000	1,030	104				
	CELM-2	LLFML31-08L601A	5000	800	110	>80	7.3	190	38.4
		LLFML31-08L401A	4000	800	110				
		LLFML31-08L301A	3500	780	105				
		LLFML31-08L201A	3000	770	104				
	CELM-3	LLFML31-10K601A	5000	1,080	110	>80	10	380	25.6
		LLFML31-10K401A	4000	1,080	110				
		LLFML31-10K301A	3500	1,040	105				
		LLFML31-10K201A	3000	1,030	104				
	CELM-4	LLFML31-10K601B	5000	1,210	110	>80	10.9	380	28.7
		LLFML31-10K401B	4000	1,210	110				
		LLFML31-10K301B	3500	1,170	105				
		LLFML31-10K201B	3000	1,160	104				
	CELM-5	LLFML61-22L601A	5000	2,430	110	>80	21.9	570	38.4
		LLFML61-22L401A	4000	2,430	110				
		LLFML61-22L301A	3500	2,350	105				
		LLFML61-22L201A	3000	2,330	104				
Square	CESM-1	LLFML33-13K601A	5000	1,480	110	>80	13.3	462	28.8
		LLFML33-13K401A	4000	1,480	110				
		LLFML33-13K301A	3500	1,450	105				
		LLFML33-13K201A	3000	1,430	104				
	CESM-2	LLFML33-37M601A	5000	4,100	110	>80	36.5	760	48
		LLFML33-37M401A	4000	4,100	110				
		LLFML33-37M301A	3500	3,930	105				
		LLFML33-37M201A	3000	3,900	104				

ReflectA Free

Features

- Innovative Technology without Light Guide Plate
- Excellent Uniformity in Slim Profile and Low Weight
- Higher Performance
- Lower UGR(<19) Version Available

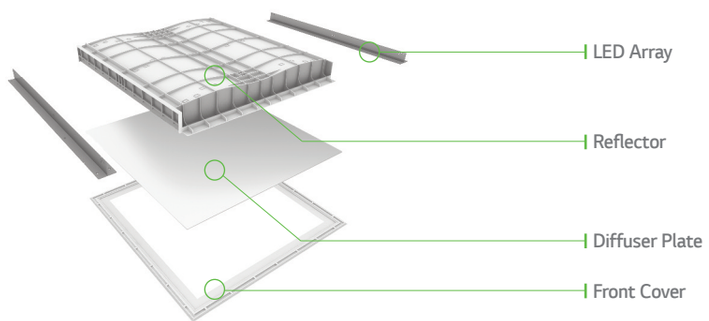
Product Line-up

1' x 4'

2' x 2'

2' x 4'

Business Model



Specifications

Product	Category	Model Number	CCT (K)	Luminous Flux (lm)	Module Efficacy (lm/W)	CRI	Power Consumption (W)	Input Current (mA)	Input Voltage (V)	Mac Adam Step
1' x 4'	Gen1	LLFMLC3-38K608A	5000	3,296	97	>80	34	1,040	29~32	4.5 SDCM
		LLFMLC3-38K408A	4000	3,200	94.1					
		LLFMLC3-38K308A	3500	3,150	92.6					
2' x 4'	Gen1	LLFMLC6-52K608A	5000	4,700	88.6	>80	50	1,560	29~32	4.5 SDCM
		LLFMLC6-52K408A	4000	4,650	87.6					
		LLFMLC6-52K308A	3500	4,600	86.7					
2' x 2'	Gen1' (80LED)	LLFML66-38K601G	5000	3,580	113	>80	32	1,040	26~34	4.5 SDCM
		LLFML66-38K401G	4000	3,440	108					
		LLFML66-38K201G	3000	3,370	106					
	Gen1' (100LED)	LLFML66-38K601H	5000	3,670	118	>80	32	1,040	26~34	4.5 SDCM
		LLFML66-38K401H	4000	3,520	114					
		LLFML66-38K201H	3000	3,430	111					
	Gen1' (120LED)	LLFML66-38K601J	5000	5,380	113	>80	48	1,560	26~34	4.5 SDCM
		LLFML66-38K401J	4000	5,160	108					
		LLFML66-38K201J	3000	4,925	103					
	Gen 2	LLFML55-38K403D	4000	3,500	109	>80	31.2	1,040	28~33	5 SDCM
		LLFML55-38K203D	3000	3,300	106					
		LLFML55-38K404F	4000	3,010	96	>90				
	Gen 2 (UGR)	LLFML55-38K403E	4000	3,250	104	>80	31.2	1,040	28~33	5 SDCM
		LLFML55-38K203E	3000	3,160	101					

Eagle Eye

Features

- Slim and Unique Round Design
- High Reliability for Outdoor Conditions(IP67)
- Future-proof Design
- 5 Different Beam Angle Lenses
- Integrated LED Array, Lens and Front Cover

Specifications

Lens Type (Beam Angle)	Model Number	CCT (K)	Luminous Flux (lm)	Module Efficacy (lm/W)	CRI	Power Consumption (W)	Input Current (mA)	Input Voltage (V)
Type II (H:160, V:70°)	LLDMAW1-18K701A	5700	1,890	110	>70	17.1	700	24.5
	LLDMAW1-18K201A	3000	1,550	91	>80			
Type III (H:135°, V:60°)	LLDMAW1-18K702A	5700	2,030	118	>70	17.1	700	24.5
	LLDMAW1-18K202A	3000	1,650	97	>80			
Type V (Square 130°)	LLDMAW1-18K703A	5700	1,990	116	>70	17.1	700	24.5
	LLDMAW1-18K203A	3000	1,630	95	>80			
Type V (Circle 130°)	LLDMAW1-18K704A	5700	2,000	117	>70	17.1	700	24.5
	LLDMAW1-18K204A	3000	1,630	95	>80			
Type V (Circle 100°)	LLDMAW1-18K705A	5700	2,020	119	>70	17.1	700	24.5
	LLDMAW1-18K205A	3000	1,620	95	>80			

Lens Information

Lens Type	Type II (H:160, V:70°)	Type III (H:135°, V:60°)	Type V (Square 130°)	Type V (Circle 130°)	Type V (Circle 100°)
Lens Image					
Horizontal View					
Vertical View					
Application	Street Lighting		Security, Parking Lot, Canopy Lighting		

Outdoor Square Module

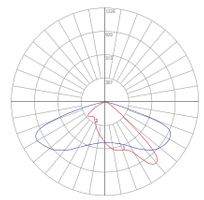
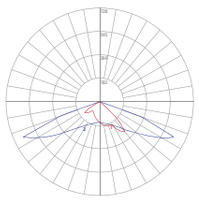
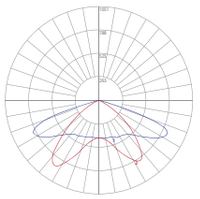
Features

- High Reliability for Outdoor Conditions(IP67)
- 3 Different Beam Angle Optic Lenses
- Easy Maintenance and Sustainable Design

Specifications

Lens Type	Model Number	CCT (K)	Luminous Flux (lm)	Module Efficacy (lm/W)	CRI	Power Consumption (W)	Input Current (mA)	Input Voltage (V)
Street (Type A/B)	LLRMAE6-25L701A	5700	2,430	113	>75	21.5	700	30
	LLRMAE6-25L401A	4000	2,400	111	>70			
Street (Type C)	LLRMAE6-25L702A	5700	2,430	113	>75	21.5	700	30
	LLRMAE6-25L402A	4000	2,400	111	>70			
Tunnel	LLRMAE6-25L705A	5700	2,430	113	>75	21.5	700	30
	LLRMAE6-25L405A	4000	2,400	111	>70			

Light Distribution

Lens Type	Street (Type A / B)	Street (Type C)	Tunnel
Intensity Distributions			

LED Driver

Downlight Driver

Flat Driver

Tube Driver

Outdoor Driver

Wireless Bulb Driver

Wireless Lighting Control Solution

Downlight Driver

Features & Benefits

Features	• Adjustable Output Current	• SELV Output Voltage
	• Dimming Method: 0-10V, ZigBee, TRIAC	• Active Power Factor Correction
	• Multiplex Communication System	• 50,000hrs Lifetime
Benefits	• Compatibility with Diverse LED Modules	• Compliant SELV LED Drivers
	• Multiple Dimming Scheme	• Multiple Luminaires per line
	• Wireless Controllability	• Excellent Reliability

Product List

• **Note:** 1. U : Under Development 2. P : Programmable

Model	Output			Input Voltage (Vac)	Type of Dimming	PF	Efficiency (%)	Dimension (LxWxHmm)	Certification
	Power (W)	Voltage (Vdc)	Current (A)						
PIDN-J009A	9	30-36	0.25	110-130	TRIAC	0.9	Typ. 80	75*71*27	cUL
PIDA-Z210B	9	33-42	0.21	220-240	-	0.9	Min. 80	74*60*34	KC, CE
PIDA-C201A	9	36-42	0.21	120-277	TRIAC	0.9	Min. 78	74*60*34	CE, cUL
PIDK-L011W	10	23-25	0.4	120-277	0-10V, ZigBee	0.9	Typ. 83	161*97*42	-
PIDB-L213W	11	25-28	0.4	100-240	0-10V, ZigBee	0.9	Min. 80	155*84*33	KC
PIDN-J013A	13	30-36	0.36	110-130	TRIAC	0.9	Typ. 80	75*71*27	cUL
PIDB-Z210B	13	33-42	0.32	220-240	-	0.9	Min. 80	74*60*34	KC, CE
PCIB-Z102B	16	25-31	0.54	230-277	-	0.9	Min. 82	71*60*16	-
PCIB-Z102A	16	27-31	0.54	230-277	-	0.9	Min. 82	71*60*18	-
PIDK-L024W	20	23-25	0.4/0.6/0.8	120-277	0-10V, ZigBee	0.9	Typ. 85	161*97*42	-
PIDB-L223W	20	28-31	0.64	100-240	0-10V, ZigBee	0.9	Min. 80	155*84*33	KC
U PIDN-T025A	25	12-36	0.7	120-277	0-10V	0.9	Min. 82	62*96*30	-
PIDK-L033W	28	26-31	0.94	220-240	0-10V, ZigBee	0.9	Min. 80	155*84*33	KC
PIDC-L233A	28	30-33	0.86	120-277	0-10V	0.9	Min. 81	122*76*34	-
PIDK-L040W	35	23-25	1.0/1.2/1.4	120-277	0-10V, ZigBee	0.9	Typ. 85	161*97*42	-
U PIDN-T040A	38	30-54	0.7	120-277	0-10V	0.9	Min. 84	71*96*32	-
P PIDN-J039A	39	20-56	0.2-0.7	120-277	0-10V	0.9	Typ. 86	78*126*38	cUL
U P PIDN-Z050A	50	14-54	0.7-1.4	120-277	0-10V	0.9	Min. 86	71*96*32	-

Flat Driver

Features & Benefits

Features

- Single Stage Concept
- Adjustable Output Current
- Dimming Method: 0-10V, DALI, ZigBee
- Active Power Factor Correction
- 50,000hrs Lifetime

Benefits

- Flicker Free
- Compatibility with Diverse LED Modules
- Multiple Dimming Scheme
- Multiple Luminaires per line
- Excellent Reliability

Product List

Model	Output			Input Voltage (Vac)	Type of Dimming	PF	Efficiency (%)	Dimension (LxWxHmm)	Certification
	Power (W)	Voltage (Vdc)	Current (A)						
U P PIFN-W030N	30	10-54	0.5-1.05	120-277	0-10V	0.9	Min. 83	335*30*26	CE, cUL
PIFE-W037D	35	24-34	1.04	120-277	DALI	0.9	Min 80	360*30*26	CE, DALI
PIFN-J037A	35	24-34	1.04	120-277	ZigBee, BLE	0.9	Min. 80	360*30*26	cUL
PIFC-I201A	35	26-34	1.04	100-277	0-10V	0.9	Min. 83	360*30*26	KC, CE, ENEC, cUL
PIFC-C201B	37	19-23	0.80-1.61	120-277	0-10V	0.9	Min. 84	397*30*26	-
N PIFE-S037I	37	30-50	0.75	220-240	0-10V	0.9	Min. 83	125*80*23	CE
PIFK-Z037A	37	31-48	0.78	220-240	0-10V	0.9	Min. 84	335*30*26	KS
PIFN-C037A	37	32-50	0.75	120-277	0-10V	0.9	Min. 84	335*30*26	CE, cUL

Product List

• **Note:** 1. N : New Product 2. U : Under Development 3. P : Programmable

Model	Output			Input Voltage (Vac)	Type of Dimming	PF	Efficiency (%)	Dimension (LxWxHmm)	Certification
	Power (W)	Voltage (Vdc)	Current (A)						
PIFK-I037A	40	43-53	0.55-0.76	120-277	0-10V	0.9	Min. 83	360*30*26	CE, cUL
PIFK-I037B	40	43-53	0.76	220-240	0-10V	0.9	Min. 83	360*30*26	KS
PIFC-K250A	43	35-45	0.95	100-240	-	0.9	Min. 83	220*47*36	KS
PIFK-Z050A	46	30-48	0.95	220-240	-	0.9	Min. 84	240*38*27	KS
PIFN-C048A	46	36-46	0.7-1.0	120-277	0-10V	0.9	Min. 83	397*30*26	-
PIFK-I044B	47	33-44	1.08	220-240	0-10V	0.9	Min. 83	360*30*26	KS
PIFK-I044A	47	33-44	0.80-1.08	120-277	0-10V	0.9	Min. 83	360*30*26	CE, cUL
PIFN-X048A	48	16-24	1.4-2.0	120-277	0-10V	0.9	Min. 83	397*30*26	cUL
PIFN-C048D	48	18-24	1.4-2.0	120-277	DALI	0.9	Min. 83	424*30*26	-
PIFC-I202A	53	26-34	1.00-1.56	120-277	0-10V	0.9	Min. 83	360*30*26	KC, CE, cUL
U P PIFN-W055N	55	10-54	0.7-1.5	120-277	0-10V	0.9	Min. 83	397*30*26	CE, cUL
PIFK-I052A	56	26-31	1.30-1.85	120-277	0-10V	0.9	Min. 83	360*30*26	CE, cUL
PIFC-K250F	58	35-45	0.5-1.3	200-240	-	0.9	Min. 83	210*57*29	-
PIFN-C072B	75	18-23	2.00-3.26	120-277	0-10V	0.9	Typ. 89	424*30*26	cUL

Tube Driver

Features & Benefits

Features

- Adjustable Output Current
- Dimming Method: 0-10V, ZigBee
- SELV Output Voltage
- Active Power Factor Correction
- Efficiency up to 90%

Benefits

- Compatibility with Diverse LED Modules
- Multiple Dimming Scheme
- Compliant SELV LED Drivers
- Multiple Luminaires per line
- High Energy Efficiency

Product List

Model	Output			Input Voltage (Vac)	Type of Dimming	PF	Efficiency (%)	Dimension (LxWxHmm)	Certification
	Power (W)	Voltage (Vdc)	Current (A)						
PITK-L019D	8	55-60	0.14	100-230	-	0.7	Min. 87	47*19*15	-
PITK-I009A	9	26-33	0.29	100-240	-	0.7	Min. 78	240*32*25	KC
PITK-L019C	10	102-110	0.09	100-230	-	0.7	Min. 88	47*19*15	-
PITJ-R013B	11	70-100	0.11	100-242	-	0.9	Min. 87	368*17*14	-
PITJ-R013C	13	110-169	0.08	100-242	-	0.9	Typ. 92	375*17*14	-
PITK-M015A	14	50-52	0.28	100-242	-	0.9	Min. 88	408*17*14	-
PITK-L019B	16	111-120	0.14	100-230	-	0.8	Min. 89	47*19*15	-
PITK-F020A	17	31-35	0.50	220	-	-	-	220*15*7.5	-
PITB-Z204A	17	33-41	0.42	100-240	-	0.9	Typ. 85	240*38*25	KC, PSE
PITK-T015A	19	19-33	0.57	200-240	-	0.9	Min. 83	229*32*24	KS, KC
PITK-I019A	19	26-33	0.57	100-240	-	0.75	Min. 80	240*32*25	KC
PITB-Z201A	19	33-41	0.46	100-240	-	0.9	Typ. 85	240*38*25	KC, PSE

Product List

• **Note:** 1. U : Under Development

Model	Output			Input Voltage (Vac)	Type of Dimming	PF	Efficiency (%)	Dimension (LxWxHmm)	Certification
	Power (W)	Voltage (Vdc)	Current (A)						
U PITJ-R019A	19	75-120	0.148-0.163	100-242	-	0.9	Typ. 92	375*17*14	-
PITK-L019A	19	192-208	0.09	100-230	-	0.8	Min. 87	47*19*15	-
PITB-L202A	20	32-41	0.49	220-240	-	0.9	Min. 83	240*38*25	-
PITB-Z203A	20	33-41	0.48	100-240	-	0.9	Min. 83	240*38*25	KC, PSE
PITK-L019F	20	130-140	0.14	100-230	-	0.8	Typ. 90	47*19*18	-
PITK-M022A	22	67-70	0.32	100-242	-	0.9	Min. 88	408*17*14	-
PITK-L019E	22	226-244	0.09	100-230	-	0.8	Min. 88	47*19*15	-
U PITK-F022A	22	62-74	0.30	220	-	-	-	220*15*7.5	-
PITK-T025A	23	25-40	0.57	200-240	-	0.9	Min. 85	229*32*24	KS, KC
PITB-Z207A	23	32-41	0.46-0.57	100-240	-	0.9	Min. 83	240*32*25	KC, PSE
PITB-I201A	23	32-41	0.57	220-240	-	0.9	Typ. 85	240*38*25	KC
PITB-I101A	23	33-41	0.57	100-240	-	0.9	Typ. 85	240*38*25	PSE
PITB-K327F	27	32-48	0.57	220-240	-	0.9	Min. 83	240*38*25	KC
PITC-F027A	27	32-48	0.57	220-240	-	0.9	Min. 83	240*38*25	-
U PITK-F033A	33	62-74	0.45	220	-	-	-	220*15*7.5	-
U PITK-W041N	41	175-195	0.21	120-277	ZigBee	0.9	Min. 89	340*42*24	-
PITB-L301D	44	26-39	0.57x2	100-240	0-10V, ZigBee	0.9	Min. 83	280*40*27	KC, CE, PSE
U PITK-W077C	77	145-189	0.41	100-242	ZigBee	0.9	Min. 90	441*42*25	-
U PITK-W077N	80	175-195	0.41	120-277	ZigBee	0.9	Min. 90	453*45*24	-

Outdoor Driver

Features & Benefits

Features

- Adjustable Output Current
- Dimming Method: 0-10V, DALI
- Programmable Functions
- Active Power Factor Correction
- Efficiency up to 93%

Benefits

- Compatibility with Diverse LED Modules
- Multiple Dimming Scheme
- Constant Line Output
- Multiple Luminaires per line
- High Energy Efficiency

Product List

Model	Output			Input Voltage (Vac)	Type of Dimming	PF	Efficiency (%)	Dimension (LxWxHmm)	Certification
	Power (W)	Voltage (Vdc)	Current (A)						
PISK-I025A	26	25-37	0.70	220-240	0-10V	0.9	Min. 82	148*46*33	KS,CCC
PISE-A027A	27	22-27	1.0	120-277	0-10V	0.9	Typ. 83	148*46*34	CE, cUL, ENEC
M PISE-A040D	40	38-77	0.35-0.7	120-277	0-10V, DALI	0.9	Max. 88	148*60*34	CE, cUL, ENEC, DALI
PISE-A040A	40	38-77	0.35/0.5/0.7	120-277	0-10V	0.9	Max. 88	148*60*34	CE, cUL, ENEC
U PISN-T050A	50	13-40	1.25	100-277	0-10V	0.9	Max. 90	148*60*37	-
PISC-C201A	50	20-25	2.0	120-277	0-10V	0.9	Min. 83	138*47*32	cUL
U PISN-C048A	50	20-25	2.0	120-277	0-10V	0.9	Min. 83	138*47*32	-
PISK-I050A	52	25-37	1.4	220-240	0-10V	0.9	Min. 85	148*60*37	KS,CCC
PISE-A055A	55	44-55	1.0	120-277	0-10V	0.9	Min. 85	148*60*34	CE, cUL, ENEC
M PISE-A075D	75	68-152	0.35-0.7	120-277	0-10V, DALI	0.9	Max. 92	243*59*40	CE, cUL, ENEC, DALI
PISE-A075A	75	80-152	0.35/0.5/0.7	120-277	0-10V	0.9	Max. 92	243*59*40	CE, cUL, ENEC
PISK-L075W	75	80-152	0.35/0.45/ 0.53/0.6/0.7	120-277	0-10V	0.9	Max. 92	243*59*40	CE, cUL
PISK-L075X	75	80-130	0.7	220	0-10V	0.9	Min. 88	243*59*40	KC
PISK-I075A	78	25-37	2.1	220-240	0-10V	0.95	Min. 85	191*68*40	KS,CCC
PISN-C100A	100	15-24	4.1	120-277	0-10V	0.9	Min. 84	243*59*40	cUL
PISD-W201B	100	20-26	2.4-4.0	100-240	0-10V	0.9	Max. 90.5	228*68*40	KC, KS, CE, PSE, IP65
PISD-W201F	100	20-26	2.4-4.0	120-277	0-10V	0.9	Max. 90.5	228*68*40	cUL
PISD-W201C	100	28-37	2.0-2.7	100-240	0-10V	0.9	Max. 91	228*68*40	KC, KS, CE, PSE, IP65
PISD-W201G	100	28-37	2.0-2.7	120-277	0-10V	0.9	Max. 91	228*68*40	cUL
PISD-W201D	100	38-50	1.3-2.0	100-240	0-10V	0.9	Max. 91.5	228*68*40	KC, KS, CE, PSE, IP65

Product List

• **Note:** 1. N : New Product 2. U : Under Development 3. M : Multi Function

Model	Output			Input Voltage (Vac)	Type of Dimming	PF	Efficiency (%)	Dimension (LxWxHmm)	Certification
	Power (W)	Voltage (Vdc)	Current (A)						
PISD-W201H	100	38-50	1.3-2.0	120-277	0-10V	0.9	Max. 91.5	228*68*40	cUL
U PISK-I100A	104	25-37	2.8	220-240	0-10V	0.95	Typ. 90	263*68*43	KS
PISE-A110A	110	68-110	1.0	120-277	0-10V	0.9	Min. 88	243*59*40	CE, cUL, ENEC
PISE-W202B	120	20-26	3.0-5.0	100-240	0-10V	0.9	Max. 91	228*68*40	KC, KS, CE, PSE, IP65
PISE-W202F	120	20-26	3.0-5.0	120-277	0-10V	0.9	Max. 91	228*68*40	cUL
PISE-W202C	120	28-37	2.5-3.4	100-240	0-10V	0.9	Max. 91.5	228*68*40	KC, KS, CE, PSE, IP65
PISE-W202G	120	28-37	2.5-3.4	120-277	0-10V	0.9	Max. 91.5	228*68*40	cUL
PISE-W202D	120	38-50	1.6-2.5	100-240	0-10V	0.9	Max. 92	228*68*40	KC, KS, CE, PSE, IP65
PISE-W202H	120	38-50	1.6-2.5	120-277	0-10V	0.9	Max. 92	228*68*40	cUL
PISE-S120A	120	40-57	2.1	120-277	0-10V	0.9	Min. 87	228*68*40	CE, ENEC
PISE-W205B	150	20-26	3.8-6.3	100-240	0-10V	0.9	Max. 91.5	228*68*40	KC, KS, CE, PSE, IP65
PISE-W205F	150	20-26	3.8-6.3	120-277	0-10V	0.9	Max. 91.5	228*68*40	cUL
PISE-W205C	150	28-37	3.1-4.2	100-240	0-10V	0.9	Max. 92	228*68*40	KC, KS, CE, PSE, IP65
PISE-W205G	150	28-37	3.1-4.2	120-277	0-10V	0.9	Max. 92	228*68*40	cUL
PISE-B215H	150	30-54	0.7x4	347-480	0-10V	0.92	Min. 86	224*85*42	cUL
PISE-Z202B	150	30-54	0.7x4	120-277	0-10V	0.92	Min. 86	224*85*42	cUL
PISE-W205D	150	38-50	2.1-3.2	100-240	0-10V	0.9	Max. 92.5	228*68*40	KC, KS, CE, PSE, IP65
PISE-W205H	150	38-50	2.1-3.2	120-277	0-10V	0.9	Max. 92.5	228*68*40	cUL
PISE-Z101B	150	120-280	0.53	120-277	0-10V	0.9	Min. 89	243*59*40	CE, cUL, ENEC
M PISE-A150D	150	125-280	0.35-0.7	120-277	0-10V, DALI	0.9	Max. 93	243*59*40	CE, cUL, ENEC, DALI
PISE-A150A	150	125-280	0.35/0.5/0.7	120-277	0-10V	0.9	Max. 93	243*59*40	CE, cUL, ENEC
PISK-L150W	150	125-280	0.35/0.4/ 0.53/0.6/0.7	120-277	0-10V	0.9	Max. 93	243*59*40	CE, cUL
PISK-L150X	150	125-240	0.7	220	0-10V	0.9	Min. 89	243*59*40	KC
PISE-Z101A	150	130-280	0.53	120-277	0-10V	0.9	Min. 89	243*59*40	KC
U PISK-I150A	155	25-37	4.2	220-240	0-10V	0.95	Typ. 90	263*68*43	KS
U PISK-I180A	180	36-48	3.3-3.75	100-277	0-10V	0.9	Min. 88	263*68*42.7	-
PISK-P180B	186	33-38	3.5-4.9	120-277	0-10V	0.9	Min. 89	228*68*40	cUL
PISK-P180A	186	33-38	3.5-4.9	100-240	0-10V	0.9	Min. 89	228*68*40	CE, KS, PSE
N PISK-P180C	186	33-38	3.5-4.9	220-240	0-10V	0.9	Min. 89	228*68*40	CCC
U PISK-I200A	207	25-37	5.6	220-240	0-10V	0.9	Min. 85	263*68*43	KS
N PISE-A240A	240	180-310	0.5-1	120-277	0-10V	0.9	Min. 89	241*95*50	CE, cUL

Wireless Bulb Driver

Features & Benefits

Features

- Wireless On/Off and Dimming (10%-100%)
- Scheduling, Group/Individual control
- RF and Power integrated into 1 PCB
- High Efficiency over 85% with AC Direct Driver
- Triac Dimmability

Benefits

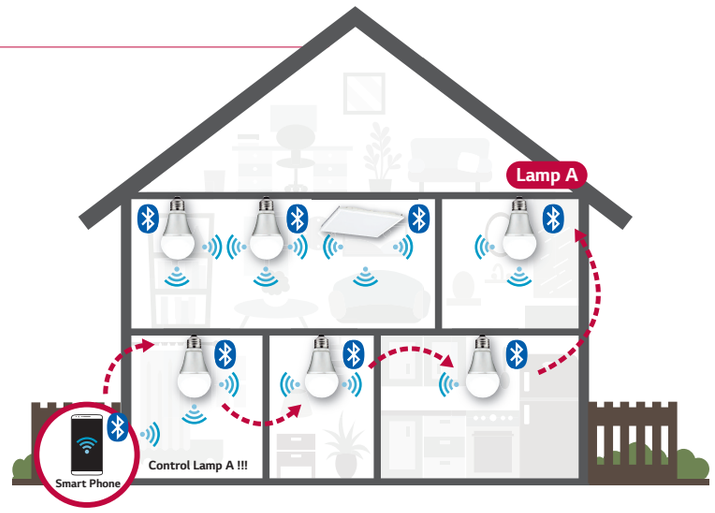
- Easy to comission luminaires thru BLE Mesh
- Ready-to-use- platform for various protocols
- Lowest concept to enable the wireless control

Product List

• **Note:** 1. U : Under Development

Model	Output			Input Voltage (Vac)	Type of Dimming	PF	Efficiency (%)	Dimension (LxWxHmm)	Certification
	Power (W)	Voltage (Vdc)	Current (A)						
U PIBW-Z010A	10.	100	0.1	120	TRIAC, BLE/ZigBee	0.9	Min. 85	60*60*117.5	-

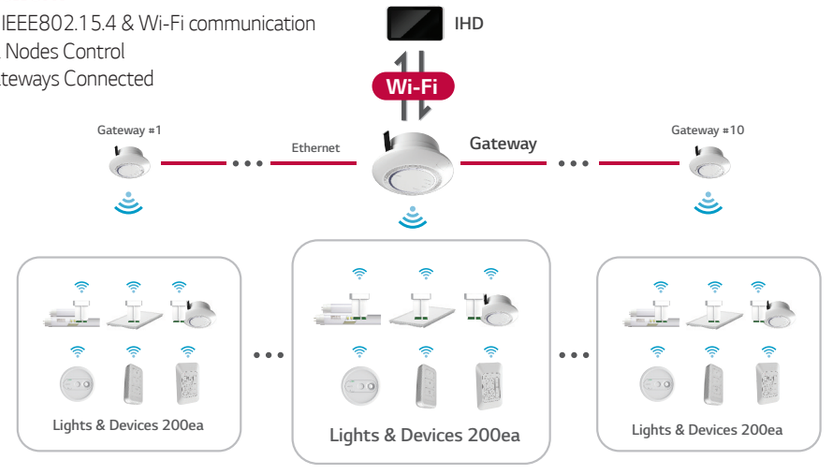
Mesh Network



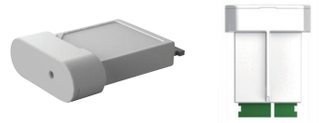
Wireless Lighting Control Network

Star Network

- 2.4GHz IEEE802.15.4 & Wi-Fi communication
- 2,000ea Nodes Control
- 10ea Gateways Connected



Wireless Module



Features

- 2.4GHz IEEE 802.15.4 compliant transceiver
- Compatible Cases with BLE and Z-wave
- Excellent Receiving sensitivity(-95dBm>)
- Programmable transmitting power adjustment
- Easy link to all kind of PWM controlled devices
- 5-Pin Connections, PWMs(UARTs), In/Out, Power
- Over-The-Air software upgrade available

Specifications

Item		Spec.	Unit	Condition
Frequency Range		2.4~2.48	GHz	-
Receiving Sensitivity		-95	dBm	Typ.
Transmitting Power		+4.5	dBm	Programmable
Current Consumption	Tx	34	mA	
	Rx	24	mA	
	Sleep	4	uA	
Communication Range		40	m	LoS

Gateway

Features

- Wireless controller for ZigBee, Z-wave and IEEE 802.15.4
- Managed by system server via Ethernet interface
- Transmission of the device's control command (Dimming, On/Off, Setting Value, OTA)
- Divided by 2 RF channels (Sensors, Lightings)
- Extends the RF coverage by using PA & LNA
- Provides extending data protocol for other device
- Table type Gateway : DC +5V

Specifications

Item	Spec.	Unit	Condition
Supply Voltage	90~270	V	AC 50/60Hz, Ceiling
Current Consumption	700mA	mA	All Operating state
Operating Condition	0 ~ 50	℃	Indoor use only
Ethernet	1	Port	TCP/IP
Connected devices	200 Max.	EA	-
Wireless Protocol	2.4~2.48	GHz	IEEE 802.15.4 PHY / IEEE 802.11.b/g
Wireless Range	Max. 40	m	GW to Devices (LoS)

PIR/Light Sensor

Features

- Pyro-electric Passive IR and Ambient Light Sensor
- Advanced occupancy detection and daylight adjustment
- Easy to install on the ceiling and easy to link

Specifications

Item	Spec.	Unit	Condition
Frequency Range	2.4~2.48	GHz	-
Supply Voltage	90~270	V	AC 50/60Hz
Current Consumption	Typ. 49	uA	Sleep state
	Max. 9.2	mA	Measuring state
	Max. 29.7	mA	Tx/Rx state
Operating Condition	0 ~ 40	℃	Indoor use only
Light Range	10 ~ 1000	Lux	-
Detection Area	5.5 x 5.5	m2	At 2.4m ceiling ht
Mounting Height	Max. 3.7	m	-
Wireless Range	Max. 40	m	Sensor to GW (LoS)

IHD(In-Home Display)

Features

- IHD(In-Home Display) : 7" Tablet & Cradle
- Commissioning & Display environmental information
- Control devices through touch screen (Group & Individual)
- S/W upgrade with OTA & Micro-SD Card
- Compatible with LGIT communication devices
- Can be Installed on the wall with own cradle

Specifications

Item	Spec.	Unit	Condition
Supply Voltage	Typ. 5.0	V	AC/DC Adaptor (5V/1.5A)
Current Consumption	TBD(500mA)	mA	Display and RF operating state
Operating Condition	0 ~ 50	℃	Indoor use only
Wireless	2400~2483.5	MHz	IEEE 802.11 a/b/g
Display	7.0	Inch	800×480
Wireless Range	Max. 40	m	IHD to GW (LoS)

Wireless Interface Module

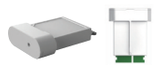
Features

- Wireless Control Dimmer Module
- AC Input Device (No requirement of additional DC supply)
- Long Distance Wireless Control thru ZigBee or BLE Mesh
- Selectable Dimming Output : PWM & 0-10V Dimming
- Easy to Install into Dimmable Luminaires or Systems

Specifications

Item		Spec.	Unit	Condition
Input Voltage		90~270	V	AC 50/60Hz
Frequency Range		2.4~2.48	GHz	-
Receiving Sensitivity		-95	dBm	Typ.
Transmitting Power		+4.5	dBm	Programmable
Communication Range		40	M	LoS
Dimming Output	PWM	0-12 PWM	V	-
	0-10	0-10 DC	V	-

Lighting Control Device List

Devices	Images.	Size	Description
Gateway		180Φ, H=100 (Ceiling Hole 120Φ)	• ZigBee, BLE, Z-Wave, WiFi, Ethernet, USB(HOST) • Demand Control Commands for other devices
Gateway		116Φ, H=78 (Table type 108Φ)	• ZigBee, BLE, Z-Wave, WiFi, Ethernet, USB(HOST) • Demand Control Commands for other devices
RF Module		29x22x7.7	• ZigBee, BLE, or Z-wave Communication • 5 Pins Interface : PWMs (or UARTs), I/O, Power(3V) • Applicable to all kinds of lighting fixtures
Sensors		95Φ, H=68 (Ceiling Hole 70Φ)	• ZigBee, BLE, or Z-wave Communication with Gateway • Advanced Occupancy Detection and Daylight Adjustment • Easy to install into the ceiling
IHD (In Home Display)		195x122x12 (7" Tablet)	• WiFi, Android based 7" Tablet • Can be Control 1K units Lighting or Other Devices • Applicable to Install on the wall with own cradle.
Remote Controller		80x40x10	• ZigBee, BLE, or Z-wave Communication • Manual Dimming and On/Off Control (Group) • Can be use standalone without gateway
Multi Switches		120x70x10	• ZigBee, BLE, or Z-wave Communication • Can be Control Lighting Devices • Can be use standalone without gateway
Wireless Interface Module		110x40x23	• ZigBee or BLE Communication • Applicable to Dimmable lighting fixtures