

Visible InGaN laser diodes product overview

blue multimode Laser in TO56 package

Description	Part Number	PD	Typ. wavelength [nm]	Optical Power [W]	Typ. Threshold current [A]	Typ. operation current [A]	Typ. Voltage	Typ. Farfield [°]	Package
1.6 W Multi Mode Blue Laser	PLPT5 447KA	-	447	1.6	0.19	1.2	4.9	10x44 (1/e ²)	TO56
2.2 W Multi Mode Blue Laser	PLPT5 450KA	-	447	2.2	0.27	1.5	4.1	8.5x48 (1/e ²)	TO56

Blue Mode Diode Laser – 1600 mW

PLPT5 447KA

Features

- TO56 3-pin package with 1.6 W optical output power at Tcase 25°C
- Efficient radiation source for cw and pulsed operation
- Wavelength: typ. 447 nm
- Operation case temperature: -20°C - +85°C
- Polarization ratio TE/TM mode: 100:1
- TO56 package – low thermal resistance of typ. Rth 13 K/W
- ESD protection diode
- Laser diode electrically isolated against package

Applications

- Laser projection
- Laser shows
- Stage Lighting
- Illumination
- Endoscopy
- Metrology

Blue Mode Diode Laser – 2200 mW

PLPT5 450KA

Features

- TO56 3-pin package with 2.2 W optical output power at Tcase 25°C
- Efficient radiation source for cw and pulsed operation
- Wavelength: typ. 447 nm
- Operation case temperature: -20°C - +85°C
- Polarization ratio TE/TM mode: 100:1
- TO56 package – low thermal resistance of typ. Rth 13 K/W
- Laser diode electrically isolated against package

Applications

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Portfolio Visible Laser

		Green 510/515 - 530nm				Cyan 486 - 490nm	Blue 440 - 455/460nm					
		10/20 mW	30 mW 50 mW	80 mW	110 mW	60 mW	20 mW	80 mW	1.6 W	2.2 W	3.0 W	3.5 W
single mode	TO56 with monitor diode	PLT5 510 PLT 520EA_P ⁽⁵⁾	PLT5 520 B1-B6 ⁽³⁾ PLT5 520 B1-B3 ⁽⁴⁾	PLPT5 520B		PLT5 488 ⁽¹⁾		PLT5 450B ⁽²⁾				
	TO38icut small size package	PLT3 510	PL 520 _B1_B2 ⁽³⁾ PL 520 B1 ⁽⁴⁾	PL 520 B	PLT3 520D		PLT3 450C	PL 450B				
multi mode	TO56								PLPT5 447KA ⁽¹⁾⁽²⁾	PLPT5 450KA ⁽²⁾		
	TO90 with ESD protection										PLPT9 450LA_E ⁽¹⁾⁽²⁾	PLPT9 450D_E A 01 ⁽¹⁾⁽²⁾

TO38icut



TO56



TO90



- (1) Additional ESD protection diode
- (2) No monitor diode
- (3) 30mW
- (4) 50mW
- (5) 20mW

Blue Mode Diode Laser – 1600 mW

PLPT5 447KA

Features

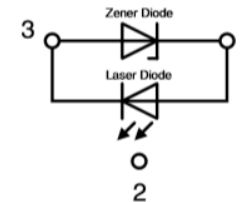
- Transversal **multi mode laser**
- $\lambda = 440 \dots 447 \dots 460 \text{ nm}$
- $P_{\text{opt}} = 1600 \text{ mW}$
- 15 μm emitter width
- High efficiency of typ. 28 %
- Typical operating current: **1200 mA**
- Typical threshold current: **190 mA**
- Beam Divergence (Full angle $1/e^2$): **$10^\circ \times 44^\circ$**
- Thermal resistance: **13 K/W**
- Operating temperature: **$-20 \text{ }^\circ\text{C} \dots +85 \text{ }^\circ\text{C}$**
- TO56 package with integrated ESD protection diode

Package

PLPT5 447KA



TO56
13 K/W



Pin 1: LD Anode
Pin 2: Package
Pin 3: LD Cathode

Blue Mode Diode Laser – 2200 mW

PLPT5 450KA

Features

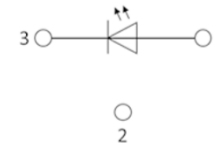
- Transversal **multi mode laser**
- $\lambda = 437 \dots 447 \dots 460 \text{ nm}$
- $P_{\text{opt}} = 2200 \text{ mW}$
- 35 μm emitter width
- High efficiency of typ. 32 %
- Typical operating current: **1500 mA**
- Typical threshold current: **270 mA**
- Beam Divergence (Full angle $1/e^2$): **$8.5^\circ \times 48^\circ$**
- Thermal resistance: **13 K/W**
- Operating temperature: **$-20 \text{ }^\circ\text{C} \dots +85 \text{ }^\circ\text{C}$**
- TO56 package

Package

PLPT5 450KA



TO56
13 K/W



Pin 1: LD Anode
Pin 2: Package
Pin 3: LD Cathode