

Serie 400 - Ceramics

OCU-400 415

Features

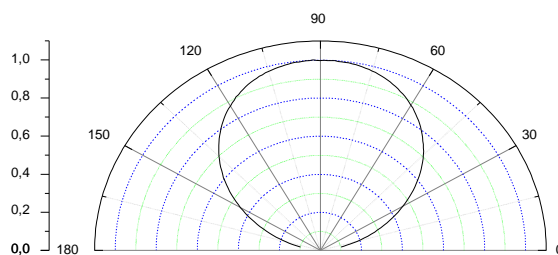
- size 3,0(L) x 2,0(W) x 1,0(H) mm
- circuit substrate: Al₂O₃ Ceramics
- encapsulation: Silicone
- devices are ROHS conform
- lead free solderable, soldering pads: gold plated
- taped in 8 mm blister tape, cathode to transporting perforation
- marking at **anode**
- all devices sorted into luminous intensity classes
- taping: face-up (T)
- high radiation intensity types



Electro-Optical Characteristics

Measured at $I_F = 20\text{mA}$, $T_a = 25^\circ\text{C}$

Parameter	Symbol	Values			Units
		min	typ	max	
Emitting Color					
Forward Voltage	V_F		3.6	3.9	V
Peak Wavelength	λ_p	415		420	nm
Spectral Width	FWHM		20	40	nm
Radiant Intensity	I_e	2.80	4.0		mW/sr
Reverse Current	I_R			100	μA



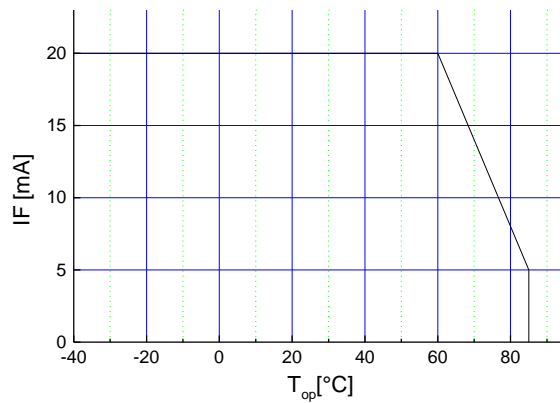
view angle

Absolute Maximum Ratings

Parameter	Symbol	Values		Units
		min	max	
Forward Current	$I_{F,max}$		30	mA
Forward Current, pulsed $t_p \leq 100\mu s, \tau = 1:10$	$I_{F,p}$		50	mA
Reverse Voltage	V_R		5	V
Thermal Resistance	$R_{th,JA}$		60	K/W
Operating Temperature	T_{Op}	-40	+85	°C
Storage Temperature	T_{St}	-40	+100	°C

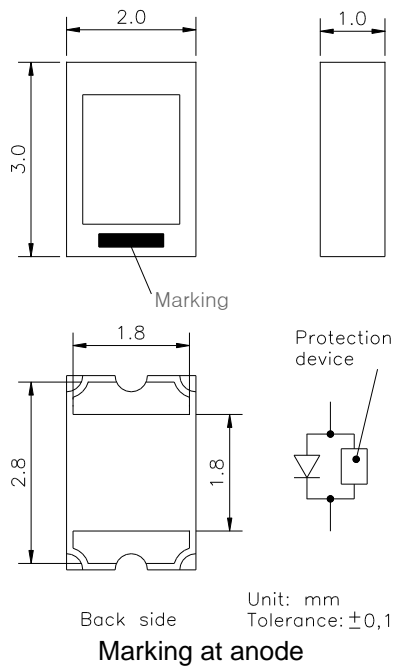
electrostatic discharge classification (MIL-STD-883)

Class 1

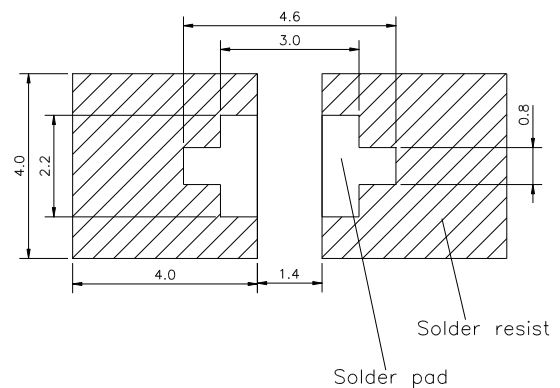


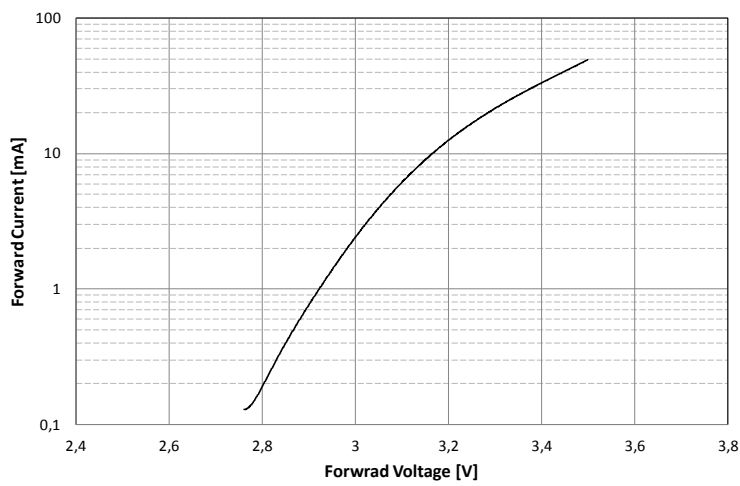
maximal forward current (DC) characteristic

Outline Drawing

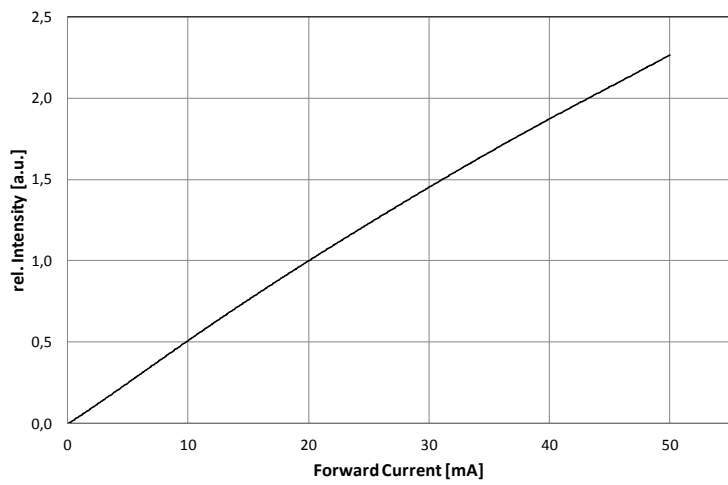


Recommended Soldering Patterns

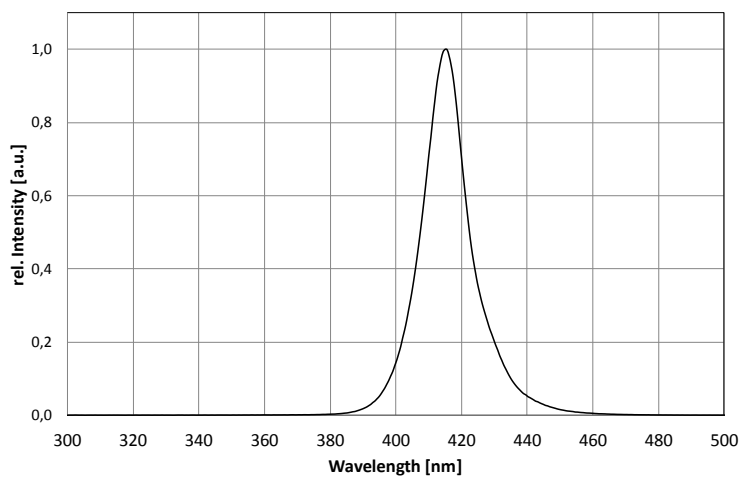




$U_F - I_F$
characteristic

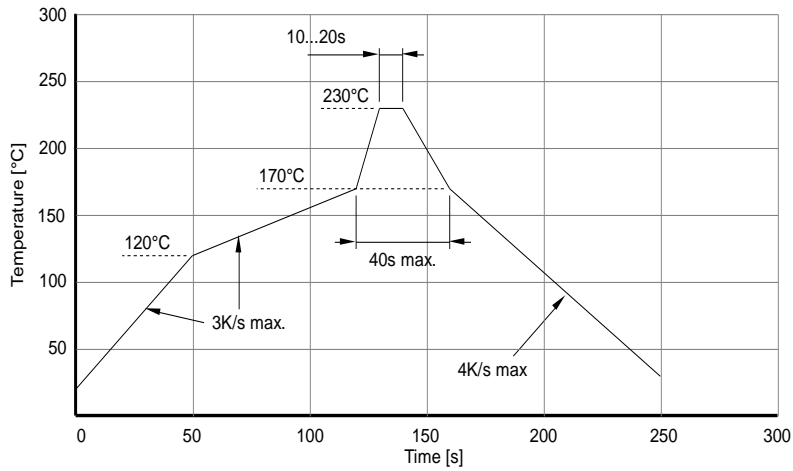


$I_F - I_{V, rel}$
characteristic

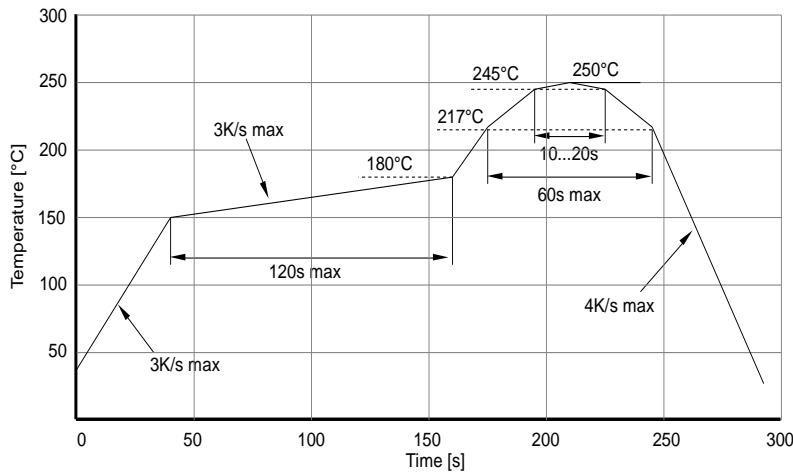


Spectrum
@ 20mA

Soldering Conditions



IR reflow soldering profile



IR reflow soldering profile for lead free soldering

Manual soldering: max power of iron 25W/ 3s/ 300°C

Ordering Code For Parts

Series	Color	Encapsulation	Packaging
OCU-400	???????	?	?
			T – taped up
		X – uncolored clear	

Type definition, e.g. OCU-400 415 –X-T

LED Radiant Intensity Groups And Subgroups [mW/sr]

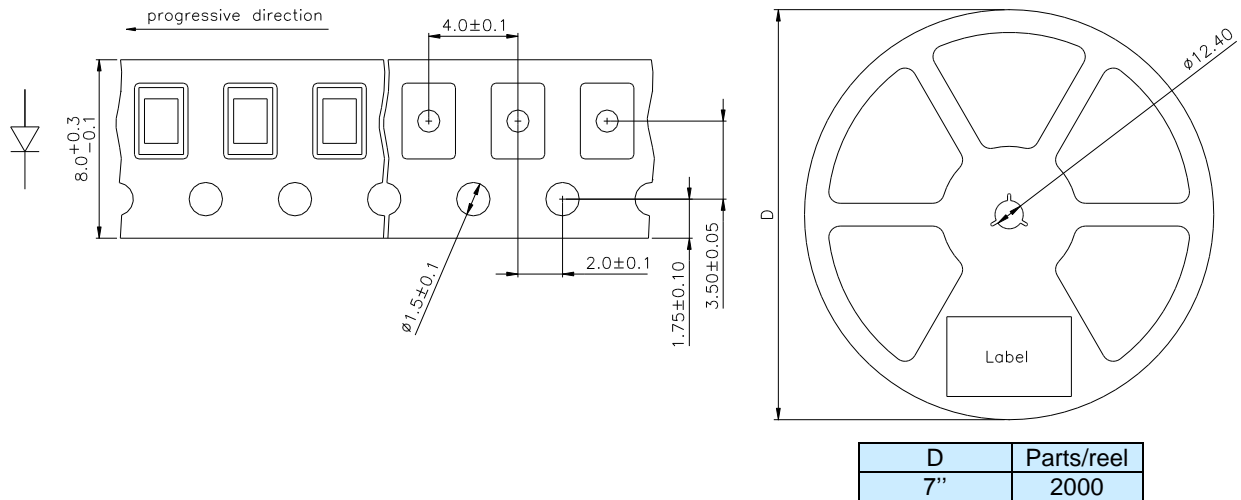
(general information – not this device specific)

C:	0.28	-	0.45	C1:	0.28	-	0.36
				C2:	0.36	-	0.45
D:	0.45	-	0.71	D1:	0.45	-	0.56
				D2:	0.56	-	0.71
E:	0.71	-	1.12	E1:	0.71	-	0.90
				E2:	0.90	-	1.12
F:	1.12	-	1.80	F1:	1.12	-	1.40
				F2:	1.40	-	1.80
G:	1.80	-	2.80	G1:	1.80	-	2.24
				G2:	2.24	-	2.80
H:	2.80	-	4.50	H1:	2.80	-	3.55
				H2:	3.55	-	4.50
J:	4.50	-	7.10	J1:	4.50	-	5.60
				J2:	5.60	-	7.10
K:	7.10	-	11.20	K1:	7.10	-	9.00
				K2:	9.00	-	11.20
L:	11.20	-	18.00	L1:	11.20	-	14.00
				L2:	14.00	-	18.00
M:	18	-	28	M1:	18.00	-	22.40
				M2:	22.40	-	28.00
N:	28	-	45	N1:	28.00	-	35.50
				N2:	35.50	-	45.00

Measured according to CIE 127. All SMD-LEDs are 100% measured and selected on full automated equipment with an accuracy of $\pm 11\%$.

**Special service: Brightness selection in sub selections possible.
Color selection in 3 sub selections possible (each subgroup per reel).**

Tape And Reel Packing



Packing: The reel is sealed in special plastic bag with integrate ESD protection (MIL - STD 81705) including a silica dry-pack
MSL level acc. to IPC/JEDEC J-STD 020D:
Level 2 for Europe
Level 2a for all other countries

Label

Order No. XXXXXXXXXX

Customer order No.

Type ?????-??-T

Intensity group ZZ Color class: CC

Color class - optional

Charge No. 1122-AAAAAA

11 Week – 22 year – A internal identification

Quantity 9999

Attention please:

The information describes the type of component and shall not considered as assured characteristics. Terms of delivery and rights to change reserved. Due to technical requirements components may contain dangerous substances. The data sheet may changed without prior information; the valid issue will be on our webpage in internet. Parameters can vary in different applications. All operating parameters must be validated for each customer application by the customer. OSA opto light does not have the responsibility for the reliability and the degradation behaviour of products made with OSA opto light diodes because they depend not only on the diode but also on the conditions of manufacture or design of the final products.

Packaging: Please use the recycling operators known to you.

Components used in life support devices or systems, toys and safety systems must be expressly authorized for such purpose!

Warnings and Handling Instructions

- **UV LEDs emit intense but mainly invisible ultraviolet radiation when in operation, which may be harmful to eyes, even for brief periods.**
- *** DO NOT LOOK DIRECTLY INTO THE UV LED DURING OPERATION ***
- *** BE SURE THAT YOU AND ALL PERSONS IN THE VICINITY WEAR SAFETY GOGGLES THAT PROVIDE SUITABLE UV PROTECTION WHEN A UV LED IS OPERATING ***
- *** KEEP CHILDREN AWAY FROM THE OPERATING VICINITY ***
- *** KEEP UV LEDs OUT OF THE REACH OF CHILDREN ***
- **If you incorporate a UV LED into a product, be sure to provide appropriate cautionary labels and instructions.**
- **Please follow all standard procedures for storing, handling, cleaning, mounting, soldering, disposal, or otherwise handling LED dies or packaged LEDs, including static electricity protection.**
- **The user has the responsibility to inform, train and instruct customers and coworkers**

- **UV- LED are ESD sensitive (Class1). The handling and usage have to consider this device property**