

**Series 400 - Ceramics**

**UV - LED**

preliminary

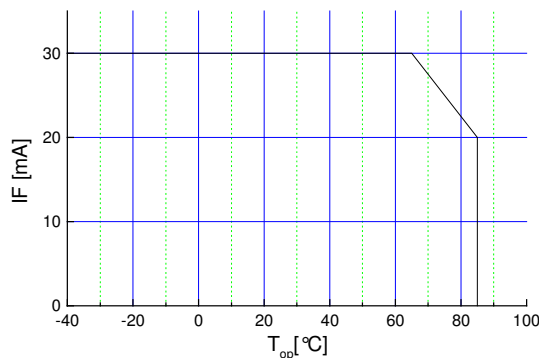
**Features**

- size 3.0(L) x 2.0(W) x 1.0(H) mm
- circuit substrate: Al<sub>2</sub>O<sub>3</sub> Ceramics
- devices are ROHS conform
- lead free solderable. soldering pads: gold plated
- taped in 8 mm blister tape. cathode to transporting perforation
- all devices sorted into luminous intensity classes
- taping: face-up (T)
- high radiation intensity types



**Absolute Maximum Ratings**

$I_{F,max}$ [mA]	$I_{F,P}$ [mA] $100 \mu s \tau=1: 10$	$t_p \leq$	$V_R$ [V]	allowable $I_{R,max}$ [mA]	Thermal resistance $R_{thJA}$ [K / W]	$T_{Op}$ [°C]	$T_{St}$ [°C]
30	50		5	100	60	-40...85	-40...100



Maximal forward current (DC) characteristic

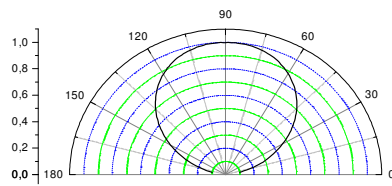
electrostatic discharge classification (MIL-STD-883E)

class 1

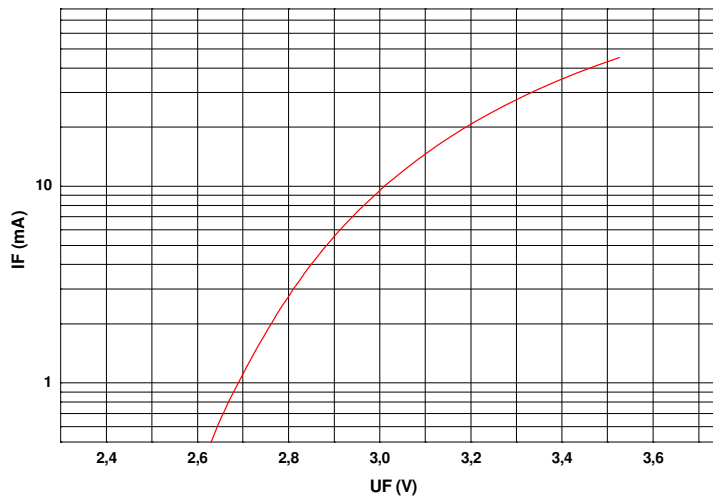
**Electro-Optical Characteristics**

Type	Marking at	measured at $I_F$ [mA]	$V_F$ [V]		$\lambda_p$ [nm]		$I_e$ [mW/sr]		$\Phi_e$ [mW]	
			typ	max	min	max	min	max	min	max
OCU-400 UE390	anode	20	3.2	4.5	390	395	1.0	3.0	2.8	8.4
OCU-400 UE400	anode	20	3.2	4.5	400	405	1.5	4.0	4.2	11
OCU-400 UE410	anode	20	3.2	4.5	410	415	1.5	4.0	4.2	11
OCU-400 UE415	anode	20	3.2	4.5	415	420	1.5	4.0	4.2	11

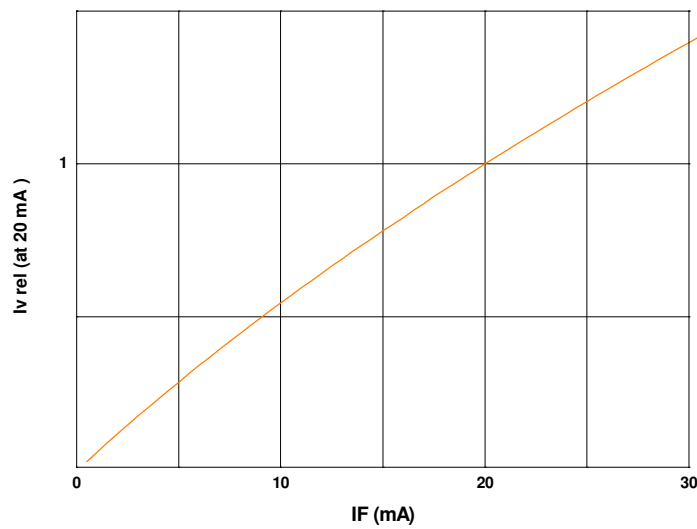
Wavelength between 365 and 420 nm upon request possible



view angle

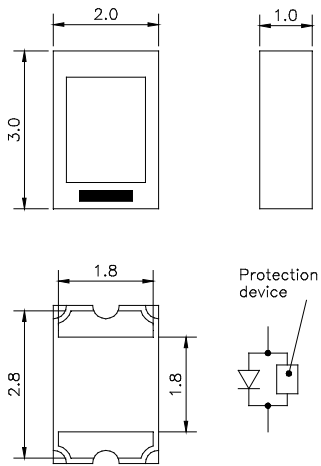


$U_F - I_F$   
characteristic



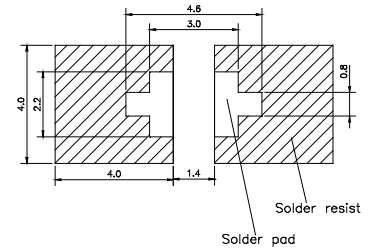
$I_F - I_{v, rel}$   
characteristic

**Outline Drawing**

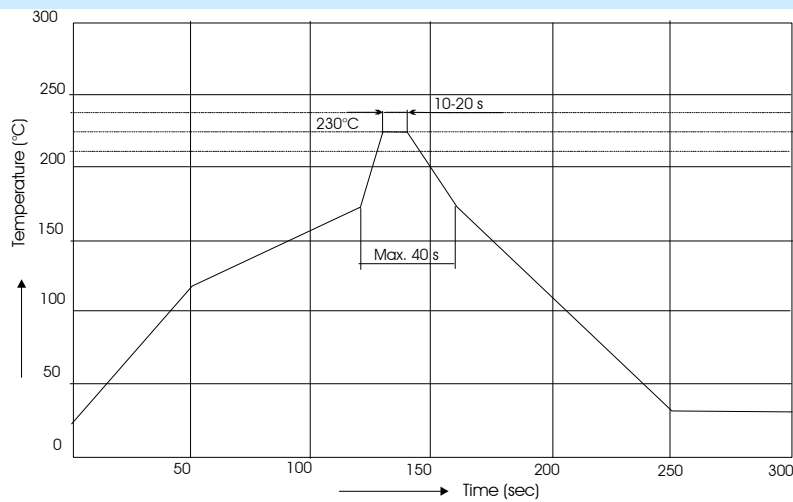


Unit: mm  
 Tolerance:  $\pm 0,1$

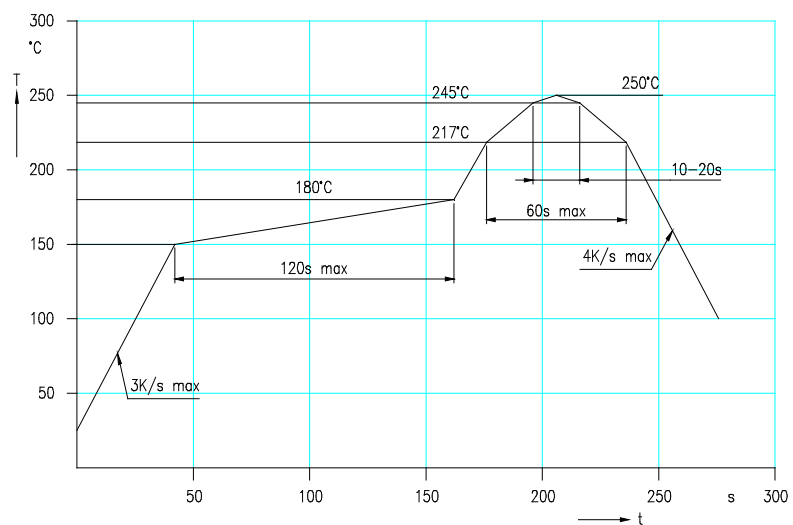
**Recommended Soldering Patterns**



**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

-    ????????

-    X

-

T

T - taped

X - uncolored clear

Type definition, e.g. OCU-400 UE390-X -T

## LED Radiation Intensity Groups [mW]

(general information – not this device specific)

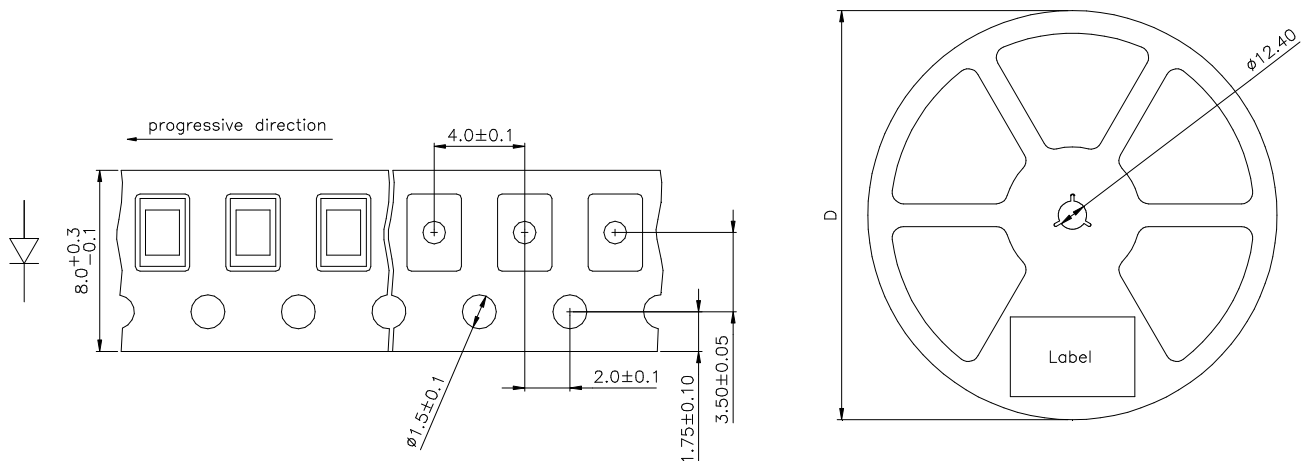
C:	0.28	-	0.45	C1:	0.28	-	0.36	P1:	45	-	56
D:	0.45	-	0.71	C2:	0.36	-	0.45	P2:	56	-	71
E:	0.71	-	1.12	D1:	0.45	-	0.56	Q1:	71	-	90
F:	1.12	-	1.80	D2:	0.56	-	0.71	Q2:	90	-	112
G:	1.80	-	2.80	E1:	0.71	-	0.90	R1:	112	-	140
H:	2.80	-	4.50	E2:	0.90	-	1.12	R2:	140	-	180
J:	4.50	-	7.10	F1:	1.12	-	1.40	S1:	180	-	224
K:	7.10	-	11.20	F2:	1.40	-	1.80	S2:	224	-	280
L:	11.20	-	18.00	G1:	1.80	-	2.24	T1:	280	-	355
M:	18	-	28	G2:	2.24	-	2.80	T2:	355	-	450
N:	28	-	45	H1:	2.80	-	3.55	U1:	450	-	560
P:	45	-	71	H2:	3.55	-	4.50	U2:	560	-	710
Q:	71	-	112	J1:	4.50	-	5.60	V1:	710	-	900
R:	112	-	180	J2:	5.60	-	7.10	V2:	900	-	1120
S:	180	-	280	K1:	7.10	-	9.00	W1:	1120	-	1420
T:	280	-	450	K2:	9.00	-	11.20	W2:	1420	-	1800
U:	450	-	710	L1:	11.20	-	14.00	X1:	1800	-	2250
V:	710	-	1120	L2:	14.00	-	18.00	X2:	2250	-	2800
W:	1120	-	1800	M1:	18.00	-	22.40	Y1:	2800	-	3550
X:	1800	-	2800	M2:	22.40	-	28.00	Y2:	3550	-	4500
Y:	2800	-	4500	N1:	28.00	-	35.50	Z1:	4500	-	5750
Z:	4500	-	7100	N2:	35.50	-	45.00	Z2:	5750	-	7100

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

### 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**

## Tape And Reel Packing



D	Parts/reel
180 mm	2000
330 mm	8000

**Packing:** The reel is sealed in special plastic bag with integrate ESD protection ( MIL - STD 81705 ) including a silica dry-pack

### Label

Order No.	XXXXXXXXXX	Customer order No.
Type	OCU-400 ?????-??-T	
Intensity group	ZZ	Color class: CC
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 and safety systems must be expressly authorized for such purpose!