

**Series 400 - Ceramics**

**UV**

preliminary Data sheet ISSUE 12/2007

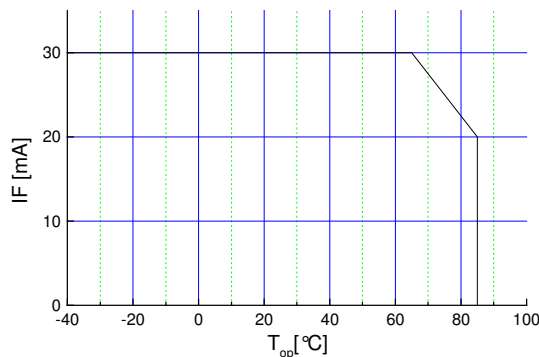
**Features**

- 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
- high radiation intensity types



**Absolute Maximum Ratings**

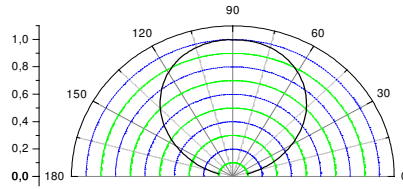
$I_{F, max}$ [mA]	$I_{F, P}$ [mA] $t_p \leq 100 \mu s$ $\tau=1: 10$	$V_R$ [V]	$I_{R, max}$ [ $\mu A$ ]	Thermal resistance $R_{thJA}$ [K / W]	$T_{Op}$ [ $^{\circ}C$ ]	$T_{St}$ [ $^{\circ}C$ ]
30	50	5	100	60	-40...85	-55...85



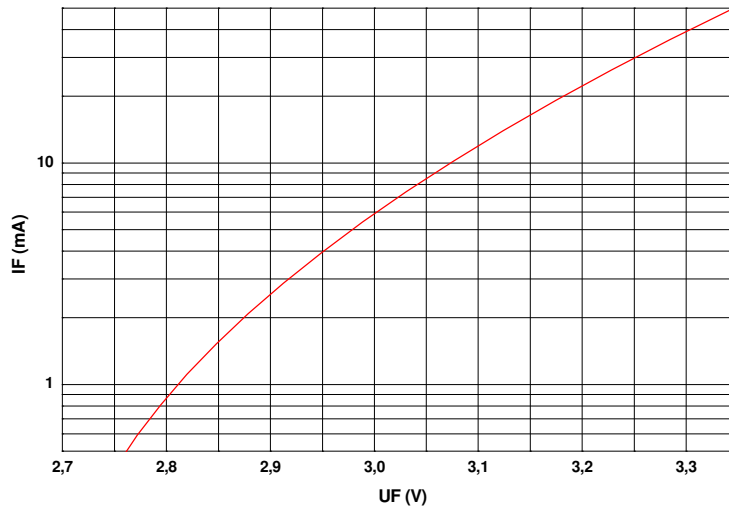
Maximal forward current (DC) characteristic

**Electro-Optical Characteristics**

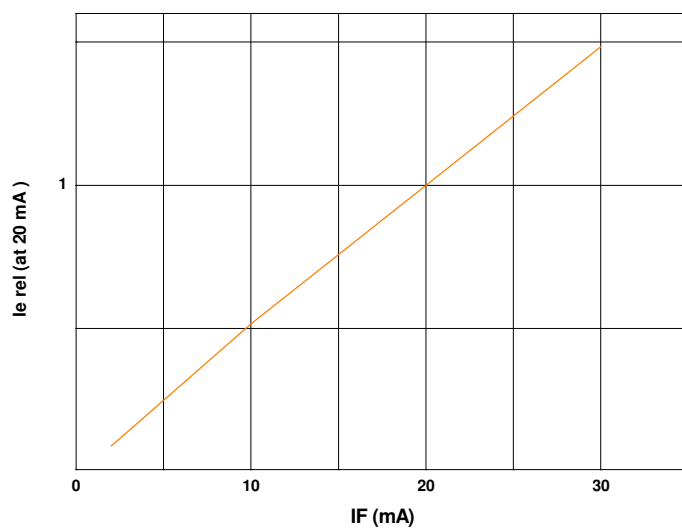
Type	Marking at	Measurement $I_F$ [mA]	$V_F$ [V]		$\lambda_p$ [nm]	$I_e$ [mW/sr]		$\Phi_e$ [mW]
			typ	max		min	typ	
OCU-400 403 OS	anode	20	3,2	4,5	403 $\pm$ 3	1,5	4,0	11,0
OCU-400 411 OS	anode	20	3,2	4,5	411 $\pm$ 4	1,5	4,0	11,0
OCU-400 418 OS	anode	20	3,2	4,5	418 $\pm$ 3	1,5	4,0	11,0



view angle

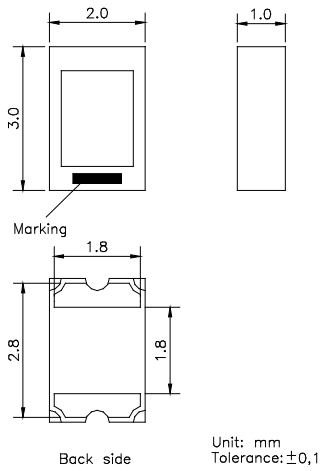


$U_F - I_F$   
characteristic

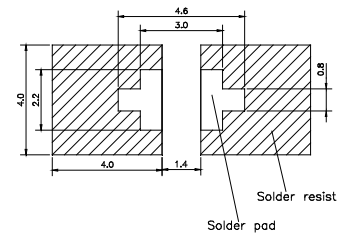


$I_F - I_{e,rel}$   
characteristic

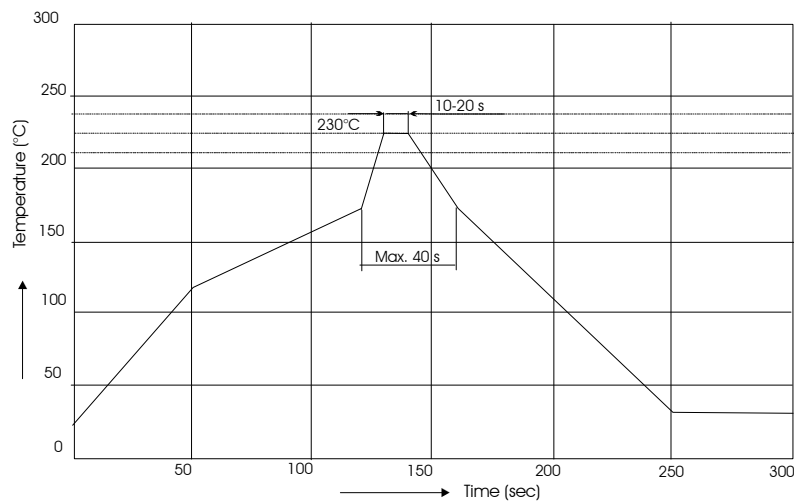
**Outline Drawing**



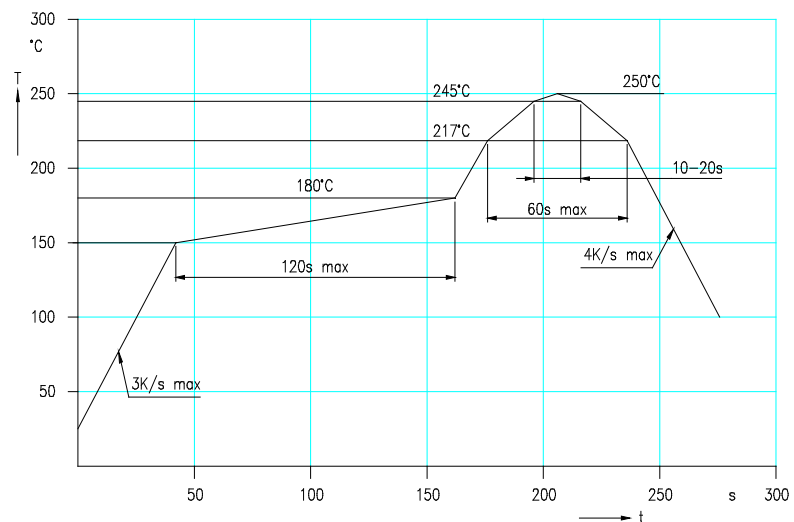
**Recommended Soldering Patterns**



**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-400 418 OS-X -T

## LED Luminous Intensity Groups And Subgroups [ mW/sr ]

(general information – not this device specific)

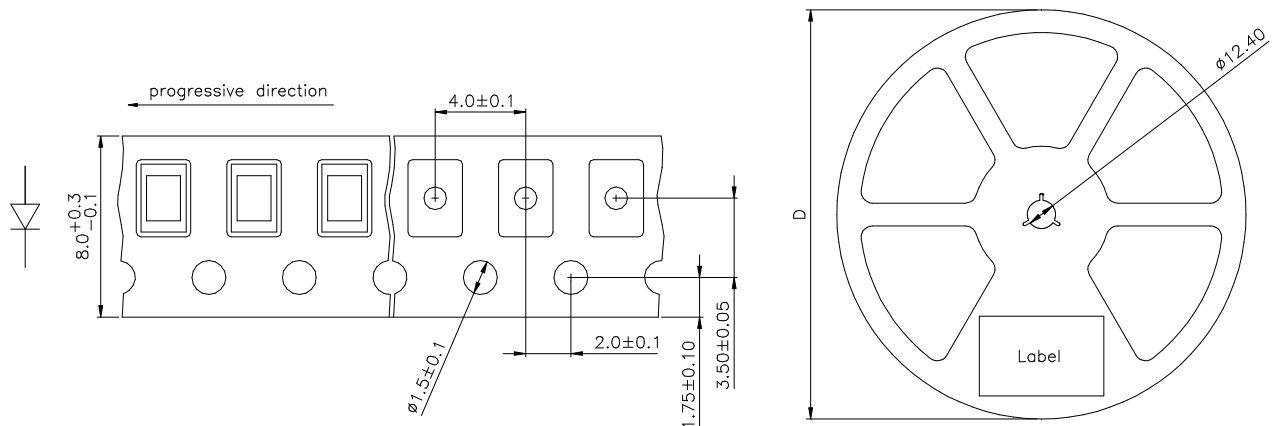
C:	0.28 - 0.45	C1:	0.28 - 0.36	J1:	4.50 - 5.60
D:	0.45 - 0.71	C2:	0.36 - 0.45	J2:	5.60 - 7.10
E:	0.71 - 1.12	D1:	0.45 - 0.56	K1:	7.10 - 9.00
F:	1.12 - 1.80	D2:	0.56 - 0.71	K2:	9.00 - 11.20
G:	1.80 - 2.80	E1:	0.71 - 0.90	L1:	11.20 - 14.00
H:	2.80 - 4.50	E2:	0.90 - 1.12	L2:	14.00 - 18.00
J:	4.50 - 7.10	F1:	1.12 - 1.40	M1:	18.00 - 22.40
K:	7.10 - 11.20	F2:	1.40 - 1.80	M2:	22.40 - 28.00
L:	11.20 - 18.00	G1:	1.80 - 2.24	N1:	28.00 - 35.50
M:	18 - 28	G2:	2.24 - 2.80	N2:	35.50 - 45.00
N:	28 - 45	H1:	2.80 - 3.55	P1:	45.00 - 56.00
P:	45 - 71	H2:	3.55 - 4.50	P2:	56.00 - 71.00

*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. XXXXXXXXX

Customer order No.

Type OCU-400 ?????-??-T

Intensity group ZZ

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.

### 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!