



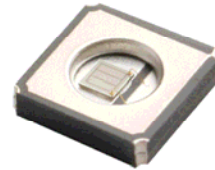
preliminary

Series 440 - Ceramics

High Power UV - LED

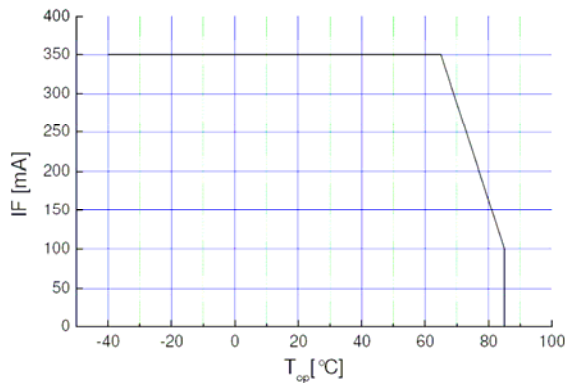
Features

- size 3.8(L) x 3.8(W) x 0.9(H) mm
- circuit substrate: AlN Ceramics
- devices are ROHS conform
- lead free solderable. soldering pads: silver plated
- taped in 16 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 μ 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] |
|-------------------|---|------------|-----------|--------------------------------|--|---------------|---------------|
| 350 | 800 | | 1 | 20 | 10 | -40...85 | -40...100 |



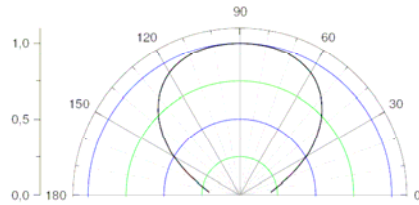
Maximal forward current (DC) characteristic

electrostatic discharge classification (MIL-STD-883E)

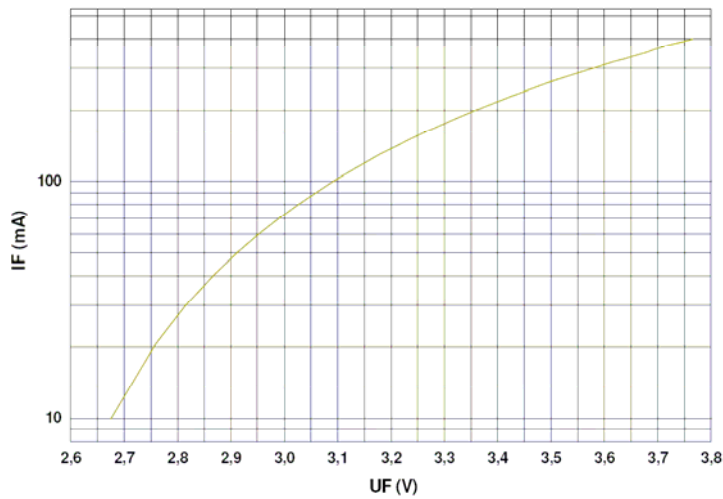
class 1

Electro-Optical Characteristics

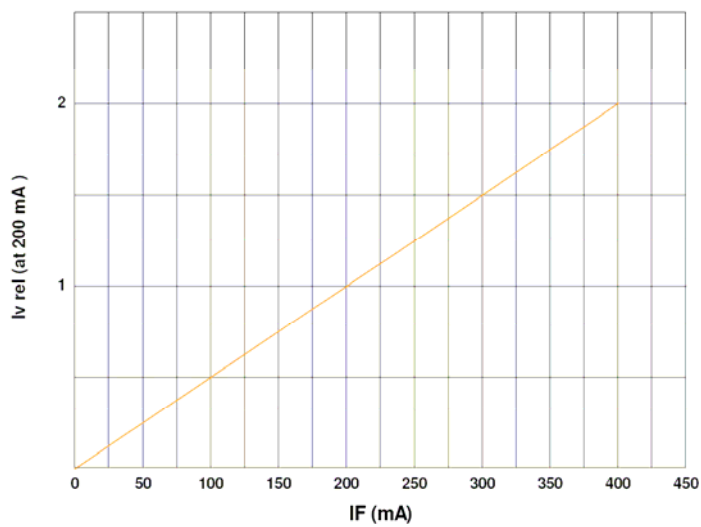
| Type | Marking at | measured at I_F [mA] | V_F [V] | | λ_p [nm] | | I_e [mW/sr] | | Φ_e [mW] | |
|--------------|------------|------------------------|-----------|-----|------------------|-----|---------------|-----|---------------|-----|
| | | | typ | max | min | max | min | max | min | max |
| RLCE-440-365 | | 350 | 3.6 | 4.5 | 365 | 370 | 15 | 32 | 40 | 90 |
| RLCE-440-380 | cathode | 350 | 3.6 | 4.5 | 380 | 385 | 32 | 55 | 90 | 160 |
| RLCE-440-390 | cathode | 350 | 3.6 | 4.5 | 390 | 395 | 45 | 95 | 130 | 260 |
| RLCE-440-400 | cathode | 350 | 3.6 | 4.5 | 400 | 405 | 70 | 110 | 190 | 310 |



view angle



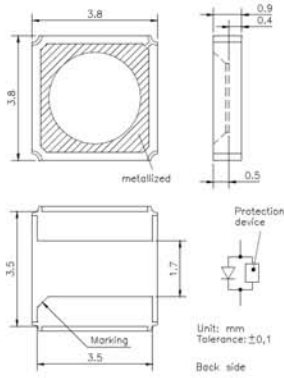
$U_F - I_F$
characteristic



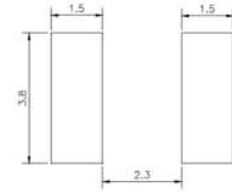
$I_F - I_{v, rel}$
characteristic



Outline Drawing

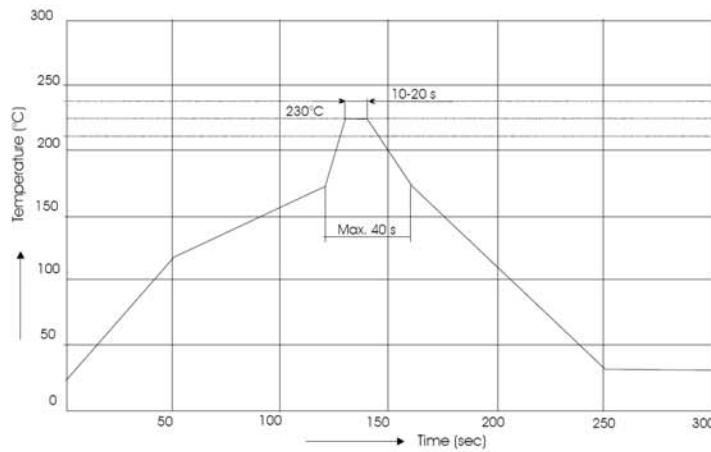


Recommended Soldering Patterns

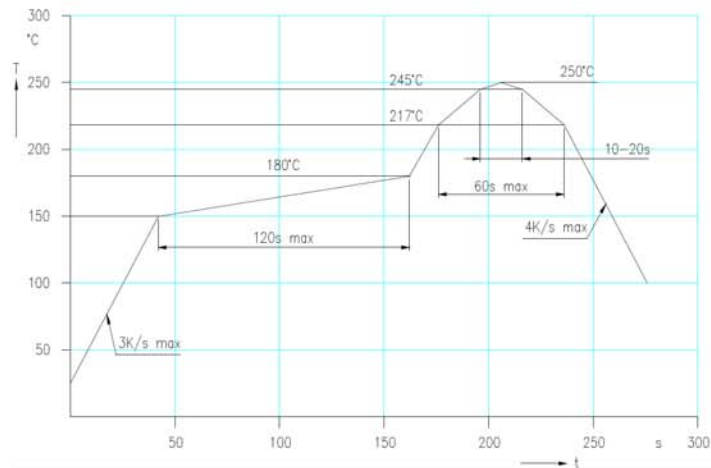


recommended min. thermal resistance
 device—ambient: 20 K/W
 4x4 mm² on IMS
 with insulating thickness < 70 μm

Soldering Conditions



IR reflow
 soldering
 profile



IR reflow
 soldering
 profile for lead
 free soldering

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

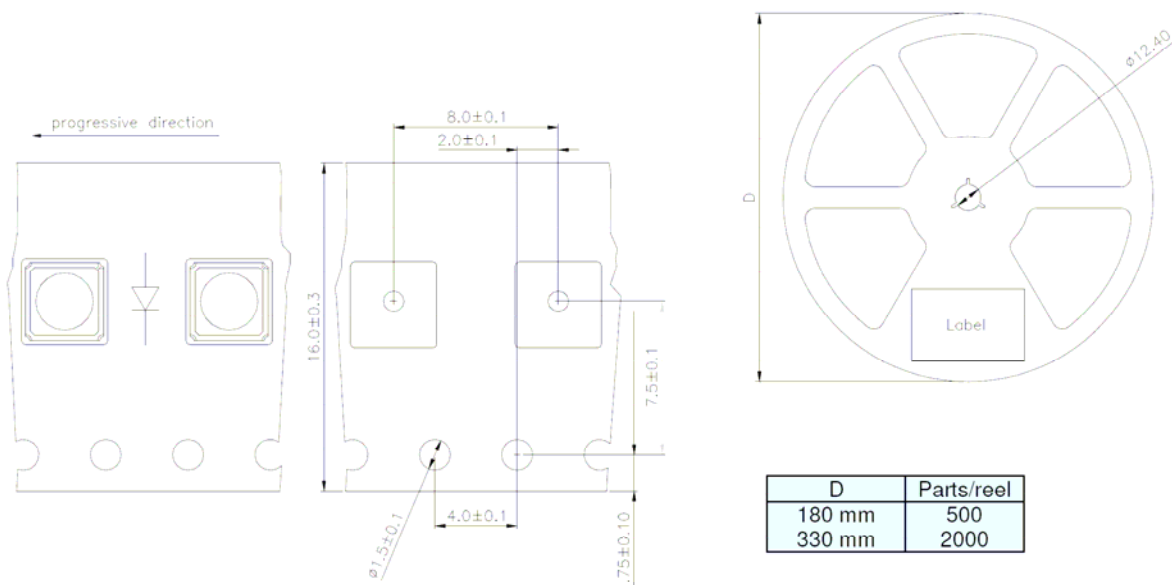


Warnings and Handling Instructions

- **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



Packing:

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