



RLCU-440-400

- High Power UV LED
- 400 nm, 190-310 mW
- Ceramic SMD, 3.8 x 3.8 x 1.0 mm
- Viewing angle: 120°



Description

RLCU-440-400 is a surface mount infrared High Power LED with a typical peak wavelength of **400 nm** and radiant intensity of typ. **190-310 mW**. It comes in ceramic SMD package with silver plated soldering pads and is taped in 12 mm blister tape (face up, cathode to transporting perforation).

Maximum Ratings

Parameter	Symbol	Values		Unit
		Min.	Max.	
Forward Current	I_F		350	mA
Pulse Forward Current * ¹	I_{FP}		800	mA
Reverse Voltage	V_R		1	V
Reverse Current	I_R		20	mA
Thermal Resistance	$R_{\theta_{JC}}$		10	K/W
Operating Temperature	T_{OP}	-40	85	°C
Storage Temperature	T_{STR}	-40	100	°C
Soldering Temperature * ²	T_{SOL}		250	°C

*¹ 1:10, pulse width = 100 μ s

*² must be completed within 3 seconds

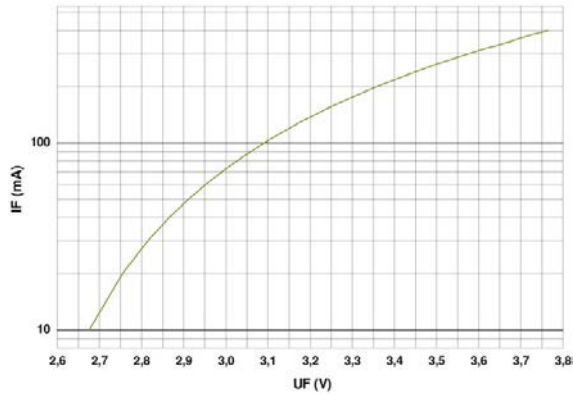
Electro-Optical Characteristics ($T_{CASE} = 25^\circ\text{C}$, $I_F = 350\text{mA}$)

Parameter	Symbol	Values			Unit
		Min.	Typ.	Max.	
Peak Wavelength	λ_P	400		405	nm
Half Width	$\Delta\lambda$				nm
Forward Voltage	V_F		3.6	4.5	V
Radiated Power	P_O	190	310		mW
Radiant Intensity	I_E	70		110	mW/sr

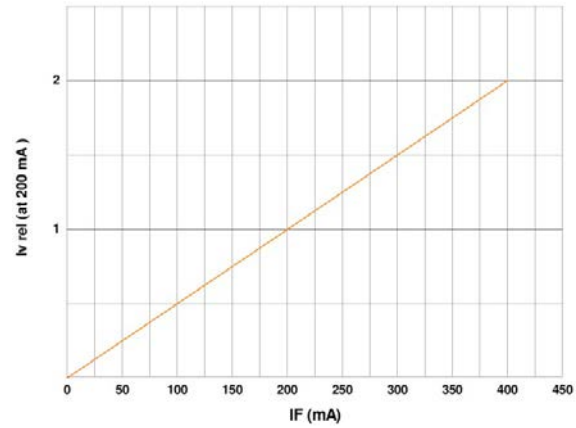


Typical Performance Curves

Forward Current vs. Forward Voltage



Intensity vs. Forward Current



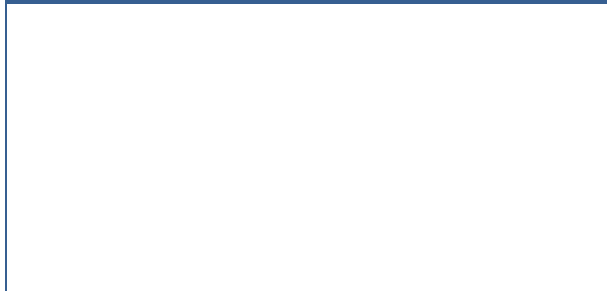
Max. Forward Current vs. Ambient Temperature



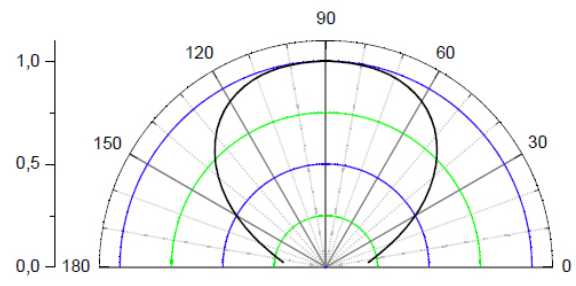
Forward Current vs. Shift Peak Wavelength



Spectrum



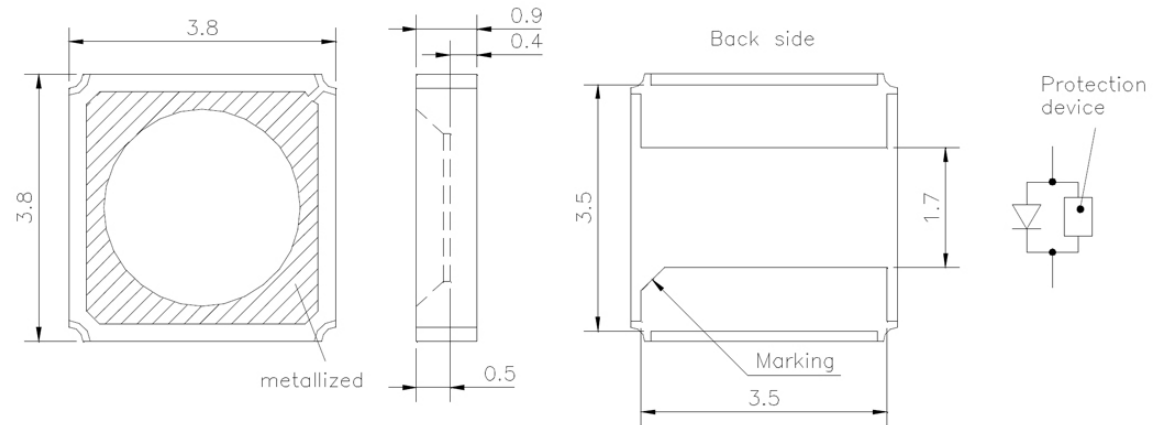
Viewing Angle





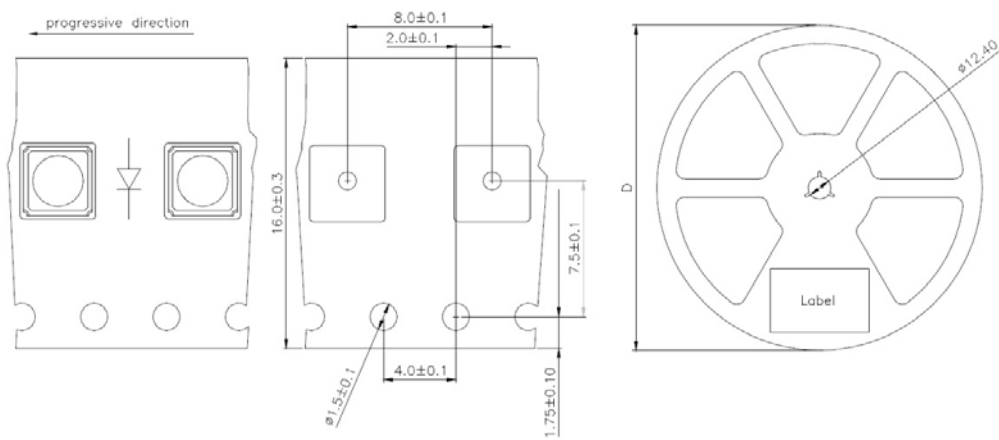
Outline Dimensions

RLCU-440



All dimensions in mm, Tolerance: ± 0.1 mm

Tabe And Reel Packing



D	Parts/reel
180 mm	500
330 mm	2000

All dimensions in mm

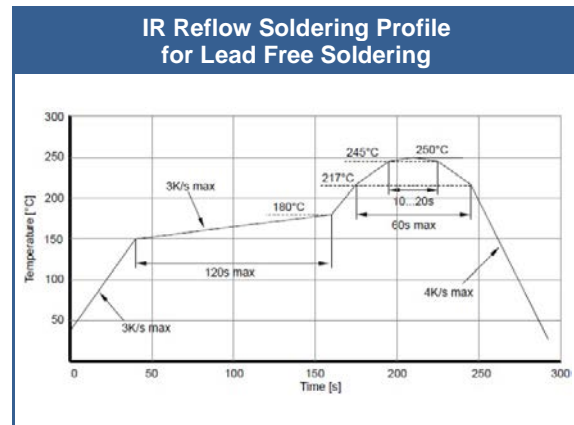
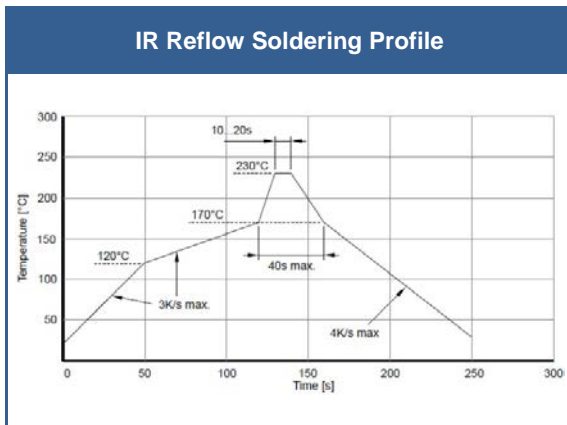


Precautions

Soldering:

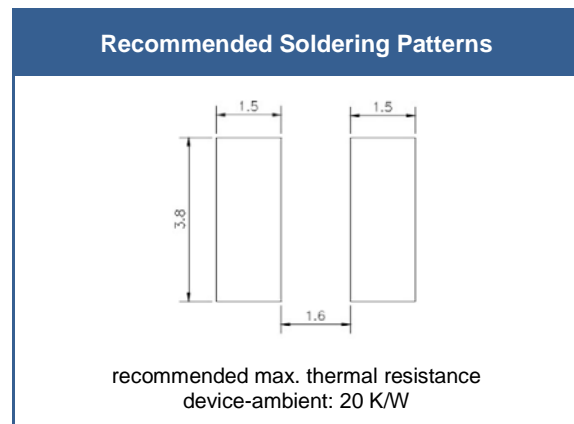
- Do avoid overheating of the LED
- Do avoid electrostatic discharge (ESD)
- Do avoid mechanical stress, shock, and vibration
- Do only use non-corrosive flux.
- Do not apply current to the LED until it has cooled down to room temperature after soldering

Recommended soldering conditions:



Manuel Soldering

soldering time	max. 3 s
soldering temperature	max. 260 °C
power of iron	max. 25 W



Above table specifies the maximum allowed duration and temperature during soldering. It is strongly advised to perform soldering at the shortest time and lowest temperature possible.



Cleaning:

Cleaning with isopropyl alcohol, propanol, or ethyl alcohol is recommended

DO NOT USE acetone, chloroform, trichloroethylene, or MKS

DO NOT USE ultrasonic cleaners

Static Electricity:

LEDs are sensitive to electrostatic discharge (ESD). Precautions against ESD must be taken when handling or operating these LEDs. Surge voltage or electrostatic discharge can result in complete failure of the device.

Radiation:

During operation these LEDs do emit **high intensity UV light**, which is hazardous to skin and eyes, and may cause cancer. Do avoid exposure to the emitted light. **Protective glasses are recommended.** It is further advised to attach a warning label on products/systems that do utilize UV-LEDs.

Operation:

Do only operate LEDs with a current source.

Running these LEDs from a voltage source will result in complete failure of the device.

Current of a LED is an exponential function of the voltage across it. Usage of current regulated drive circuits is mandatory.

© All Rights Reserved

The above specifications are for reference purpose only and subjected to change without prior notice