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AUSTRIA



RLCU-365

- UV SMD LED
- 365 nm, 12 mW
- 3020 Ceramic SMD package
- Beam Angle: $\pm 65^\circ$



Description

RLCU-365 is an ultraviolet surface mount LED, utilizing a AlInGaN based chip with a typical peak wavelength of 365 nm and optical output power of typically 12 mW. **RLCU-365** comes in 3020 ceramic SMD package with flat silicone resin mold.

Maximum Ratings*

Parameter	Symbol	Values		Unit
		Min.	Max.	
Forward Current	I_F		30	mA
Pulse Forward Current ($T_P \leq 100 \mu s$, $D=10\%$)	I_{FP}		100	mA
Reverse Voltage ($I_R = - \mu A$)	U_R	not designed for reverse operation		
Thermal Resistance	R_{THJA}		60	K/W
Operating Temperature	T_{CASE}	- 40	+ 85	$^\circ C$
Storage Temperature	T_{STG}	- 40	+ 85	$^\circ C$
Soldering Temperature ($t_{max.} 10s$)	T_{SLD}		+ 250	$^\circ C$

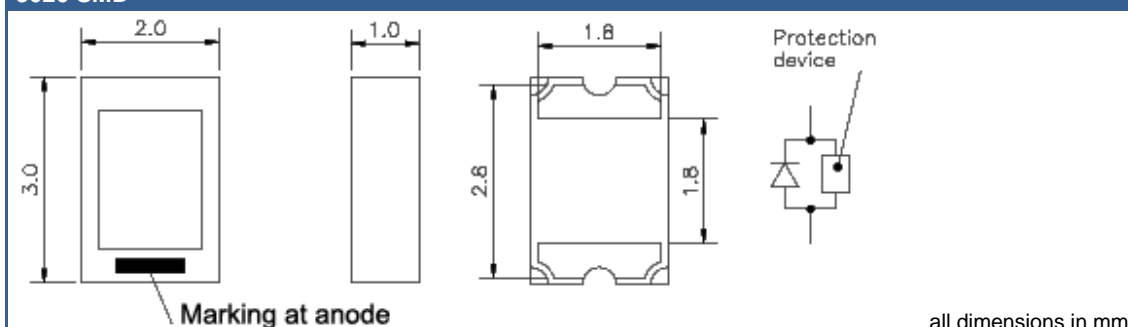
*Operating close to or exceeding these parameters may damage the device

Electro-Optical Characteristics ($T_{CASE} = 25^\circ C$)

Parameter	Symbol	Conditions	Values			Unit
			Min.	Typ.	Max.	
Peak Wavelength	λ_P	$I_F=20 \text{ mA}$	363		370	nm
Half Width	λ_{Δ}	$I_F=20 \text{ mA}$		8		nm
Forward Voltage	U_F	$I_F=20 \text{ mA}$		3.6	4.2	V
Output Power	P_O	$I_F=20 \text{ mA}$	7	12		mW
Beam Angle	$2\theta_{1/2}$	$I_F=20 \text{ mA}$		130		deg.

Outline Dimensions

3020 SMD





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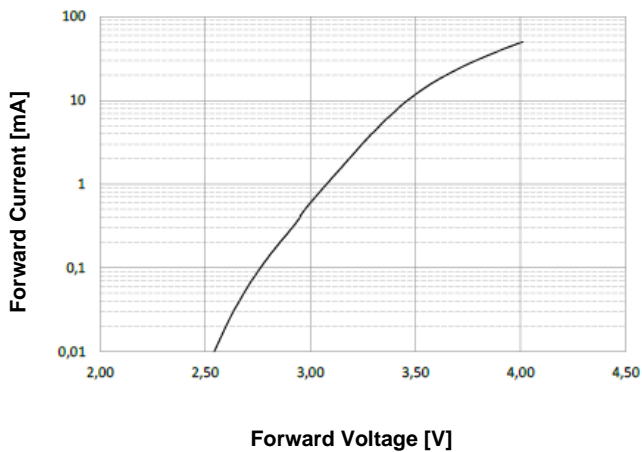
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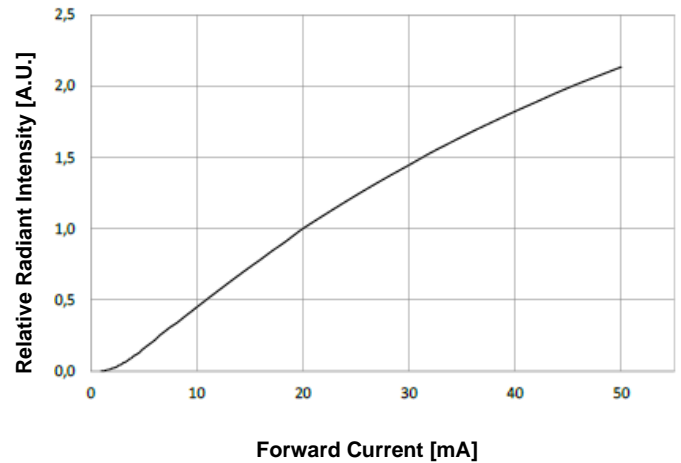


Typical Performance Curves

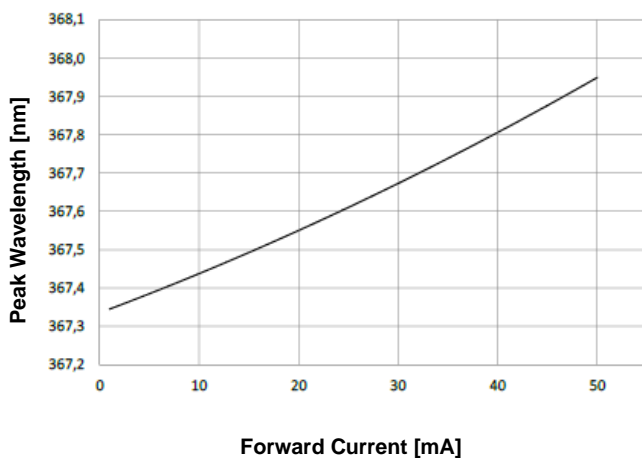
Forward Current vs. Forward Voltage



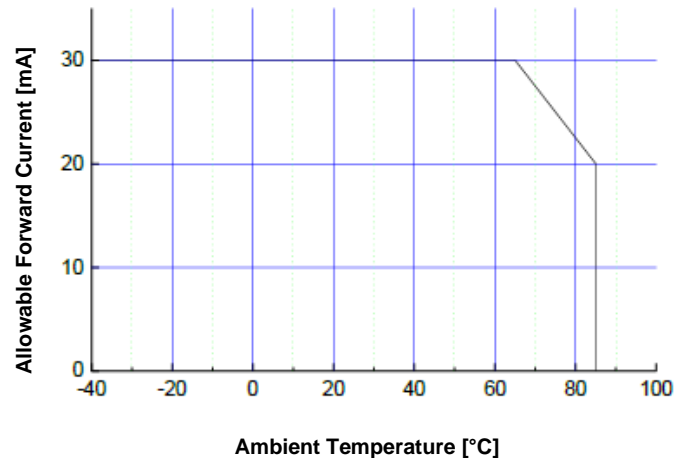
Relative Radiant Intensity vs. Forward Current



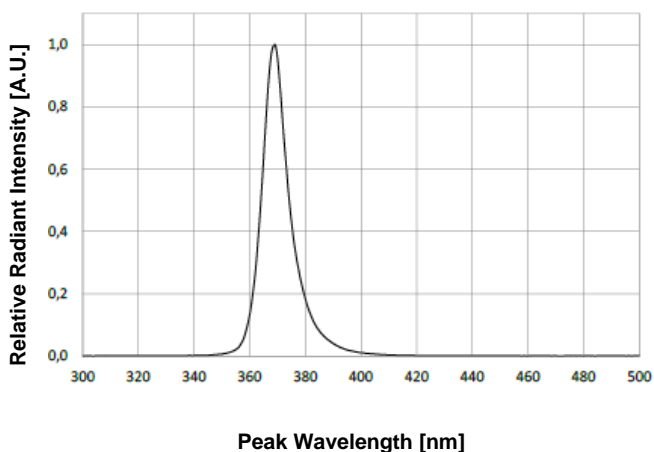
Peak Wavelength vs. Forward Current



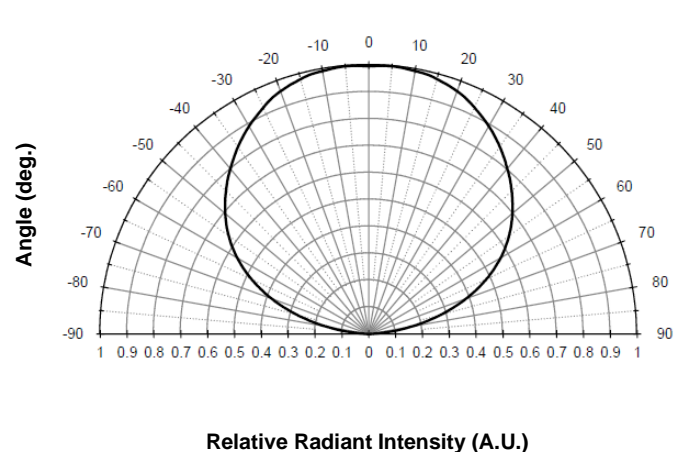
Allowed Forward Current vs. Amb. Temperature



Relative Spectral Emission



Radiation Characteristics





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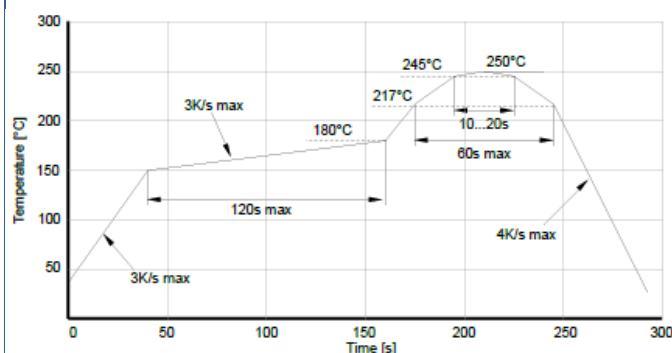


General Notes

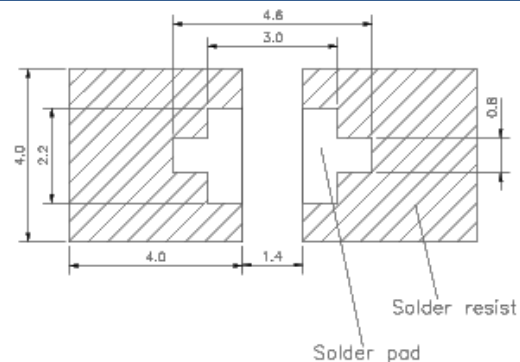
Soldering

- 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 lead free soldering conditions



Recommended soldering patterns



Unit: mm

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 LED.

Radiation

- During operation these LEDs do emit light, which **could be hazardous to skin and eyes**, and **may cause cancer**.
- Do avoid exposure to the emitted light. Protective glasses if needed
- It is further advised to attach a warning label on products/systems.

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.

Storage

- The **maximum shelf life** of LEDs in the originally sealed aluminum bag is **12 months**.
- Before opening the aluminum bag, please store it at **<30 °C, <60 % RH**.
- After opening the aluminum bag, please solder the LEDs within **72 hours (floor life)** at **5 – 30 °C, <50 % RH**.
- Put any unused, remaining LEDs and silica gel back in the same aluminum bag and then vacuum-seal the bag.
- It is recommended to keep the re-sealed bag in a desiccator at **<30%RH**.