



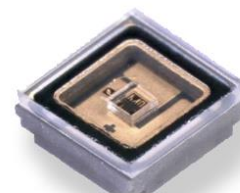
# ROITHNER LASERTECHNIK GmbH

WIEDNER HAUPTSTRASSE 76      1040 VIENNA      AUSTRIA  
TEL. +43 1 586 52 43 -0, FAX. -44      OFFICE@ROITHNER-LASER.COM



## DUV265-SD353E

- Deep Ultraviolet Light Emission Source
- 265nm, 30mW
- ESD protection
- Flat SiO<sub>2</sub> window
- Beam angle 120 deg.



### Description

**DUV265-SD353E** is an AlGaIn based single emitter **DEEP-UV LED** with a typical peak wavelength of **265 nm** and an optical output power of typically **30 mW** at a current of **350 mA** in a 3535 SMD package. It features an **integrated ESD protection** device and quartz glass window. **DUV265-SD353E** is ready for reflow soldering process, and can be delivered on tape.

### Absolute Maximum Ratings

Parameter	Symbol	min.	max.	Unit
Forward Current	$I_F$		350	mA
<b>Junction Temperature</b>	$T_J$		<b>90</b>	<b>°C</b>
Operating Temperature	$T_{OPR}$	- 30	85	°C
Storage Temperature	$T_{STR}$	- 40	85	V

### Electro-Optical Characteristics (T<sub>CASE</sub> = 25°C, I<sub>F</sub> = 350 mA)

Parameter	Symbol	min.	typ.	max.	Unit
Peak Wavelength*	$\lambda_P$	260	265	270	nm
<b>Radiated Power**</b>	$P_O$		<b>30</b>		<b>mW</b>
Spectral Width (FWHM)	$\Delta\lambda$		11		nm
Forward Voltage	$V_F$		6.0		V
<b>Viewing Angle</b>	$2\Theta_{1/2}$		<b>120</b>		<b>deg.</b>
Thermal Resistance	$R_{th}$		15		K/W

\*Peak Wavelength measurement tolerance is  $\pm 3$ nm

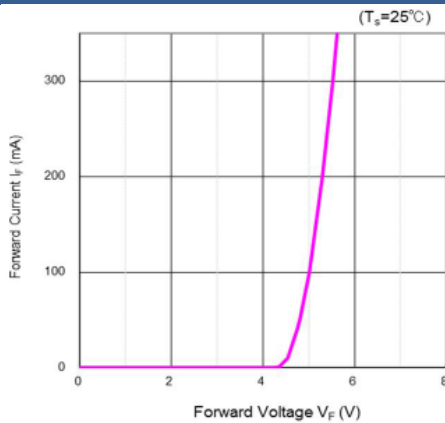
\*\*Radiated power measurement tolerance is  $\pm 10\%$

		<h2>CAUTION</h2>
	<ul style="list-style-type: none"> <li>• LEDs emit very strong UV radiation.</li> <li>• Don't look directly into the LED light. UV radiation can harm your eyes.</li> <li>• To prevent even inadequate exposure, wear protective eyewear.</li> <li>• If LEDs are embedded in devices, please indicate warning labels against the UV light LED used.</li> <li>• Keep out of reach of children.</li> <li>• Specification and dimension are subject to change for improvement without notice.</li> </ul>	

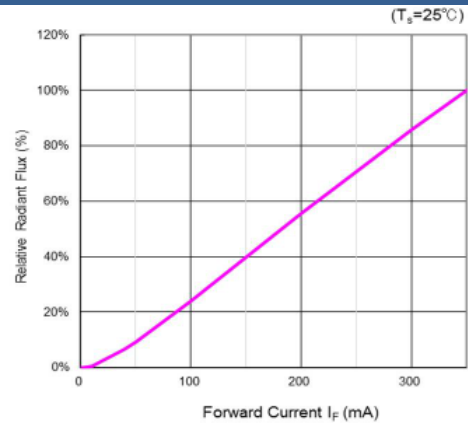


## Performance Characteristics

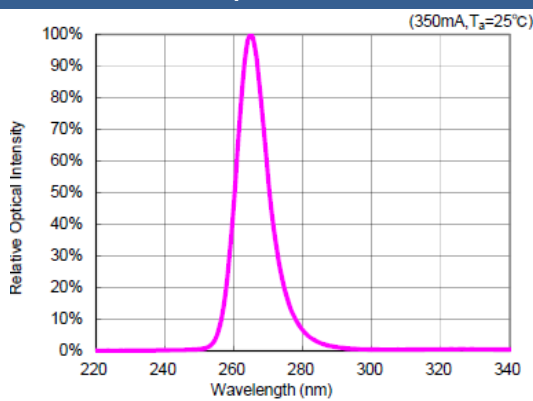
### Forward Current vs. Forward Voltage



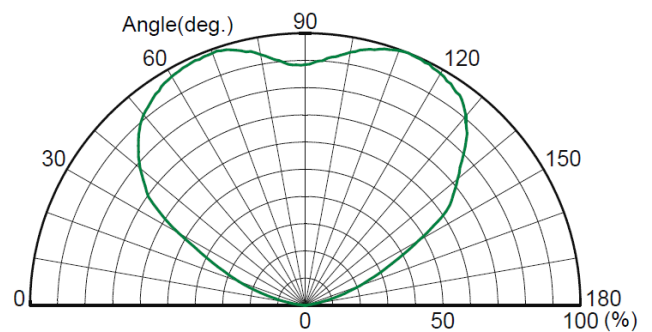
### Forward Current vs. Relative Radiant Flux [%]



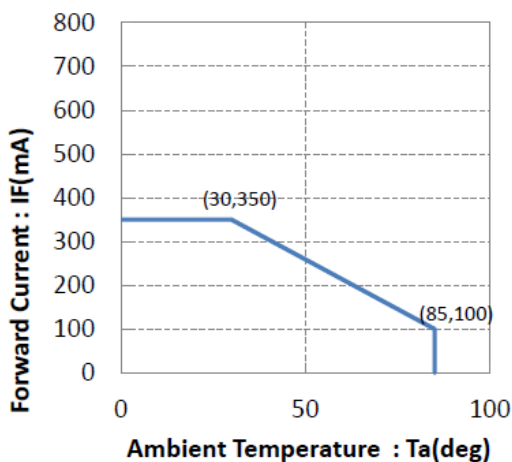
### Spectrum



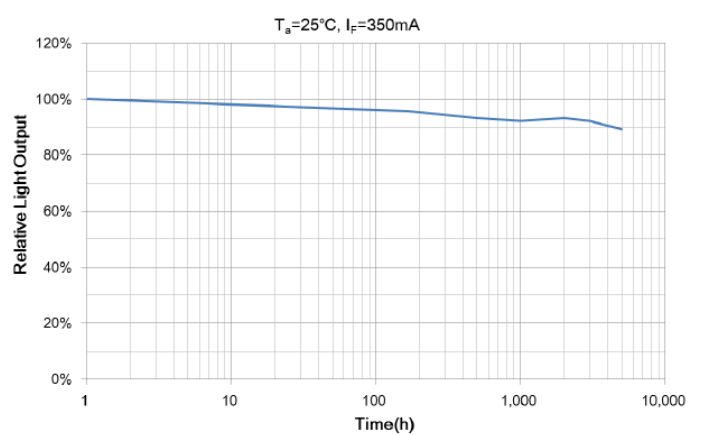
### Radiation Pattern



### Forward Current vs. Temperature



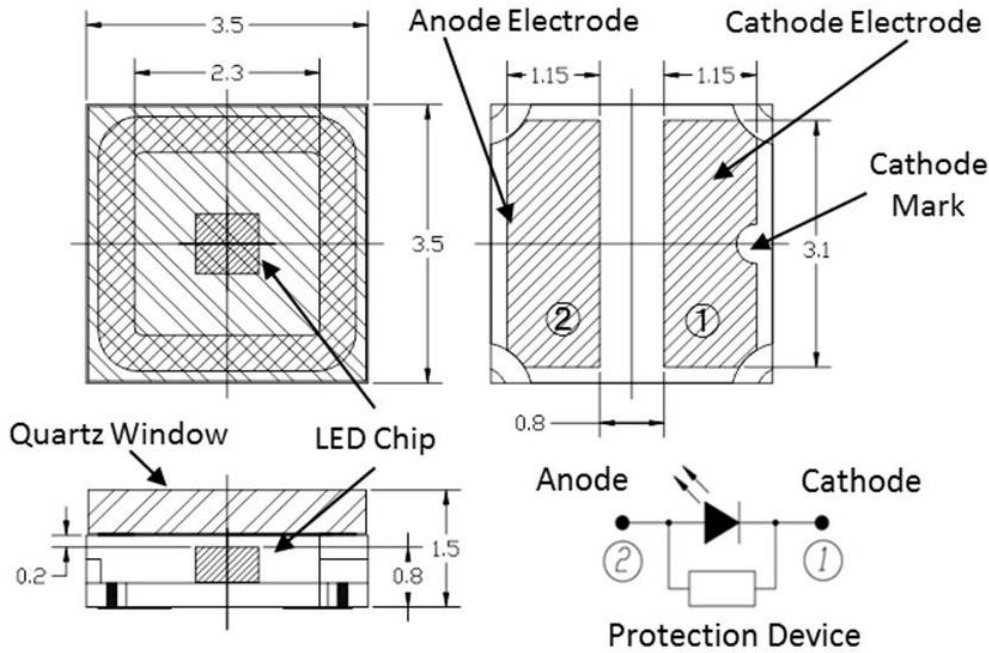
### Life Time





## Outline Dimensions

### SMD 3535

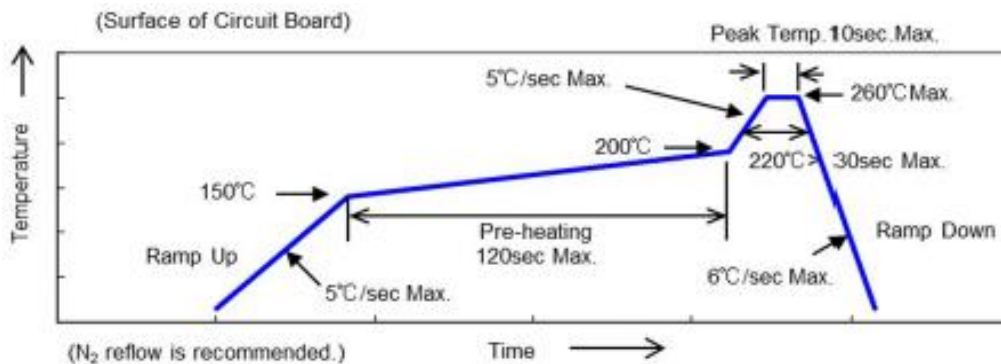


all dimensions in mm

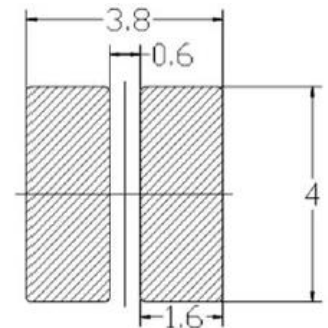
## Precautions

### Soldering

#### Reflow soldering profile



#### Recommended solder pad



all dimensions in mm



## 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.

## UV-Radiation

During operation these LEDs do emit **high intensity ultraviolet light**, which is hazardous to skin and eyes, and may cause cancer. Do avoid exposure to the emitted UV 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



## Accessories

### SD35-PCB

A printed Cu circuit board with Ni finish and Au contact plates, designed for easily soldering and mounting the SD35 series LEDs. Ideally suited for prototyping and evaluation

