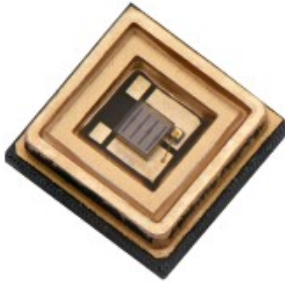


UVC Emitting Diode in SMD Package



FEATURES

- Ceramic SMT package with quartz lens
- Dimension (L x W x H) in mm: 3.5 x 3.5 x 1.62
- Forward current: up to 150 mA
- Radiant power (typ.): 10 mW at 150mA
- Leads / terminations finish: gold plated (Au)

DESCRIPTION

UVC LED with quartz lens for long life time. The package size is 3.5 mm x 3.5 mm x 1.62 mm and the radiant power up to 10 mW at 150 mA in a wavelength range of 270 nm.

PRODUCT GROUP AND PACKAGE DATA

- Product group: LED
- Package: SMD ceramic
- Product series: standard power UV LED
- Angle of half intensity: $\pm 62.5^\circ$

APPLICATIONS

- Sterilization
- Medical application
- Sensing of gases, germs, DNA, ...

SAFETY ADVICES

Depending on the mode of operation, these devices emit highly concentrated non visible ultraviolet light which can be hazardous to the human eye. Products which incorporate these devices have to follow the safety precautions given in IEC 62471 "Photobiological Safety of Lamps and Lamp Systems".

PARTS TABLE

PART	COLOR	RADIANT POWER (mW)			at I_F (mA)	WAVELENGTH (nm)			at I_F (mA)	FORWARD VOLTAGE (V)			at I_F (mA)	TECHNOLOGY
		MIN.	TYP.	MAX.		MIN.	TYP.	MAX.		MIN.	TYP.	MAX.		
UVC265–3535	Ultraviolet	8	10	12	150	265	270	275	150	6.0	7.0	9.0	150	AlGaN

ABSOLUTE MAXIMUM RATINGS ($T_{amb} = 25^\circ\text{C}$, unless otherwise specified)

PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
DC forward current		I_F	150	mA
Power dissipation		P_V	1.5	W
Electrostatic discharge		ESD	2000	V
Junction temperature		T_j	+90	$^\circ\text{C}$
Operating temperature range		T_{amb}	-30 to +80	$^\circ\text{C}$
Storage temperature range		T_{stg}	-40 to +100	$^\circ\text{C}$
Solder temperature		T_{sol}	260	$^\circ\text{C}$

OPTICAL AND ELECTRICAL CHARACTERISTICS ($T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified)

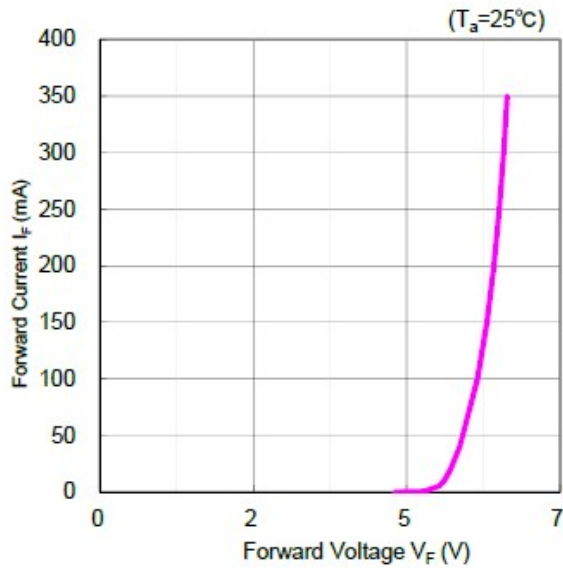
PARAMETER	TEST CONDITION	SYMBOL	MIN.	TYP.	MAX.	UNIT
Forward voltage	$I_F = 150\text{ mA}$	V_F	6.0	7.0	9.0	V
Radiant power	$I_F = 150\text{ mA}$	ϕ_e	8	10	12	mW
Peak wavelength	$I_F = 150\text{ mA}$	λ_p	265	270	275	nm
Angle of half intensity	$I_F = 150\text{ mA}$	φ	-	± 62.5	-	deg
Thermal resistance junction to solder pin		R_{thJS}	-	35	-	K/W

Note

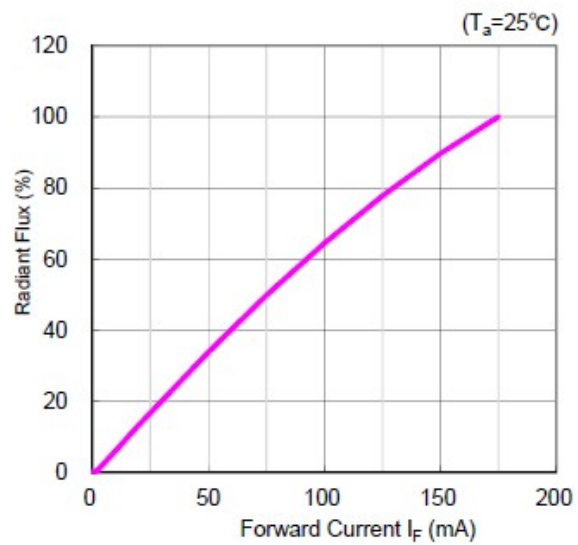
- Tolerances: $\pm 11\%$ for ϕ_e , $\pm 0.1\text{ V}$ for V_F , $\pm 3\text{ nm}$ for λ_p

TYPICAL CHARACTERISTICS ($T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified)

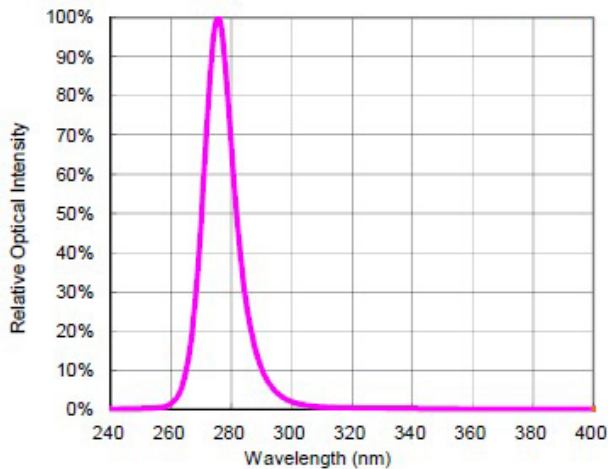
Forward Current vs Forward Voltage



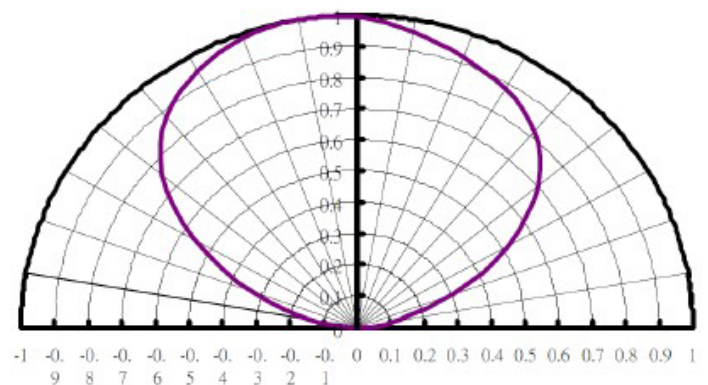
Forward Current vs Radiant Flux



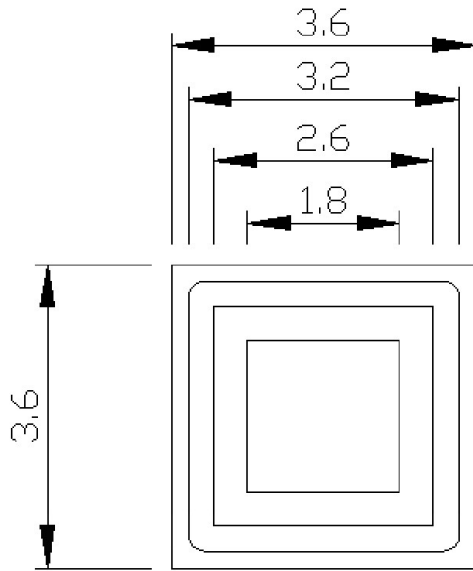
Spectrum



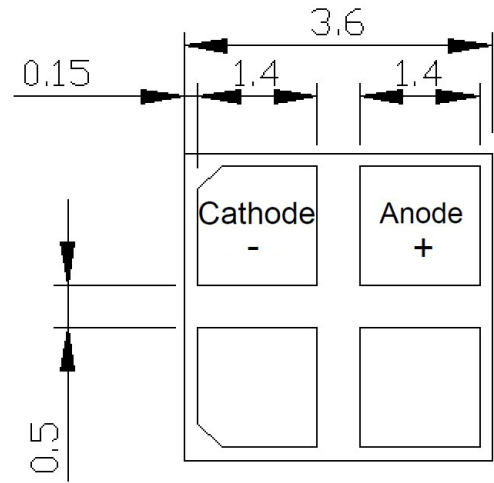
Radiation Pattern



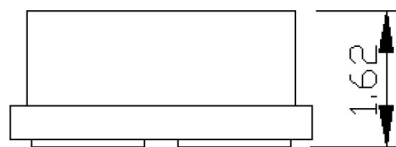
DIMENSIONS



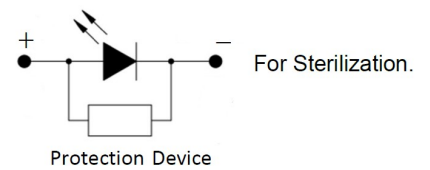
top view



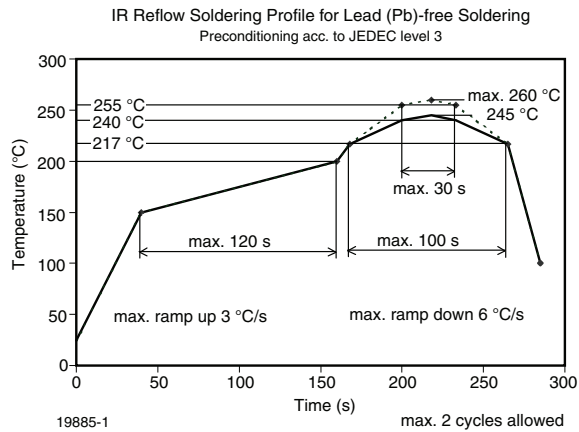
bottom view



side view

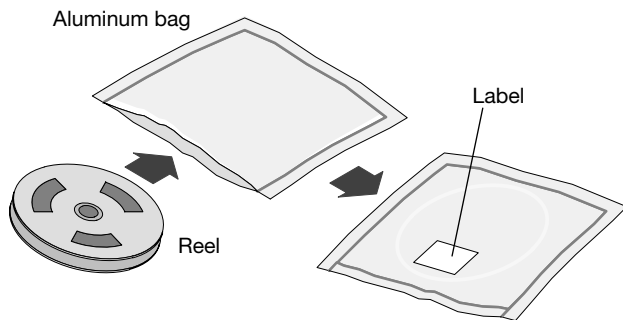


SOLDERING PROFILE



DRY PACKING

The reel is packed in an anti-humidity bag to protect the devices from absorbing moisture during transportation and storage.



FINAL PACKING

The sealed reel is packed into a cardboard box. A secondary cardboard box is used for shipping purposes.

RECOMMENDED METHOD OF STORAGE

Dry box storage is recommended as soon as the aluminum bag has been opened to prevent moisture absorption. The following conditions should be observed, if dry boxes are not available:

- Storage temperature 10 °C to 30 °C
- Storage humidity ≤ 60 % RH max.

After more than 168 h under these conditions moisture content will be too high for reflow soldering.

In case of moisture absorption, the devices will recover to the former condition by drying under the following condition:

192 h at 40 °C + 5 °C / - 0 °C and < 5 % RH (dry air / nitrogen) or

24 h at 60 °C + 5 °C and < 5 % RH for all device containers or

24 h at 100 °C + 5 °C not suitable for reel or tubes.