ROITHNER LASERTECHNIK GmbH
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DUV-HL5N

- **Deep Ultraviolet Light Emission Source**
- **310, 325, 340 nm**
- **TO39 metal can**
- **Hemispherical UV lens**
- **Beam angle 6 deg.**

RoHS COMPLIANT Pb Pb-Free

Description

DUV-HL5N is a series of **AlGaN** based single emitter DEEP-UV LEDs in a hermetically sealed TO39 package, utilizing a hemispherical UV glass lens with a beam angle of 6 degree. **DUV-HL5N** is available from 310 nm up to 340 nm peak wavelength with an optical output power of typically 0.9 mW.

Maximum Rating (T_{CASE} = 25°C)

Parameter	Symbol	Values		Unit
		Min.	Max.	
Forward Current *(T_A=25°C)*	I_F		40	mA
Operating Temperature	T_{OPR}	- 20	+ 80	°C
Storage Temperature	T_{STG}	- 40	+ 100	°C
Soldering Temp. Hand (max 5s)	T_{SOL}		+ 350	°C
Soldering Temp. Reflow (max 3s)	T_{SOL}		+ 250	°C

Electro-Optical Characteristics (T_{CASE} = 25°C, I_F =20 mA)

Parameter	Symbol	DUV310-HL5N	DUV325-HL5N	DUV340-HL5N	Unit
Peak Wavelength*	λ_P	310 ±5	325 ±5	340 ±5	nm
Radiated Power**	P_O	**0.8**	**0.9**	**1.0**	**mW**
Spectral Width (FWHM)	$\Delta\lambda$	15	11	9	nm
Forward Voltage	V_F	5.0	4.5	4.0	V
Viewing Angle	$2\Theta_{1/2}$		**6**		**deg.**

*Peak Wavelength Measurement tolerance is ±3nm.

**Radiant Flux Measurement tolerance is ±10%

Specifications are subject to change for without notice.

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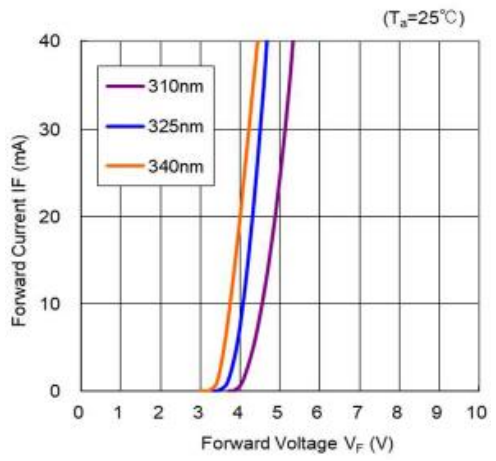
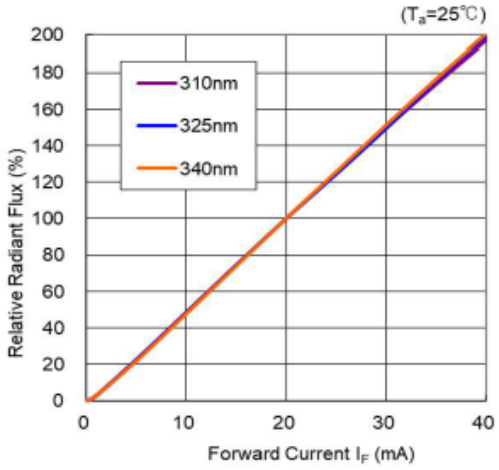
Performance Characteristics

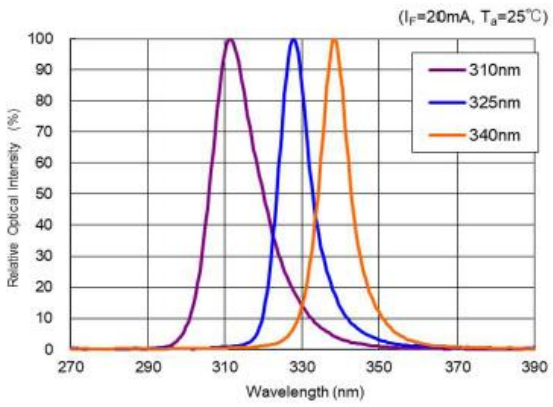
Forward Current vs. Forward Voltage



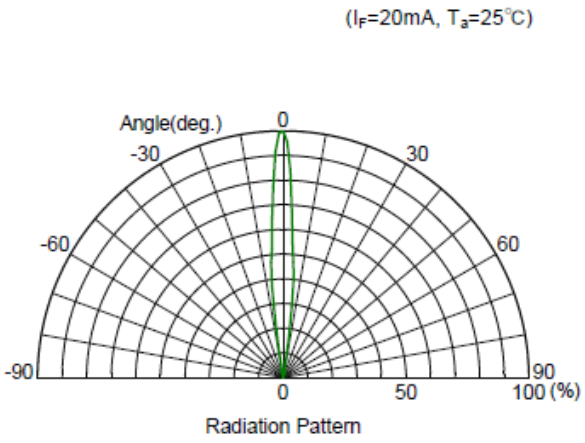
Forward Current vs. Relative Radiant Flux [%]



Spectrum



Radiation Pattern



Device Materials

Pin #	Material
Glass	UV glass
Cap	Fe-Ni alloy, Au plating
Stem	SPC, Au plating
Leads	Fe-Ni alloy, Au plating

Pb-Free RoHS COMPLIANT

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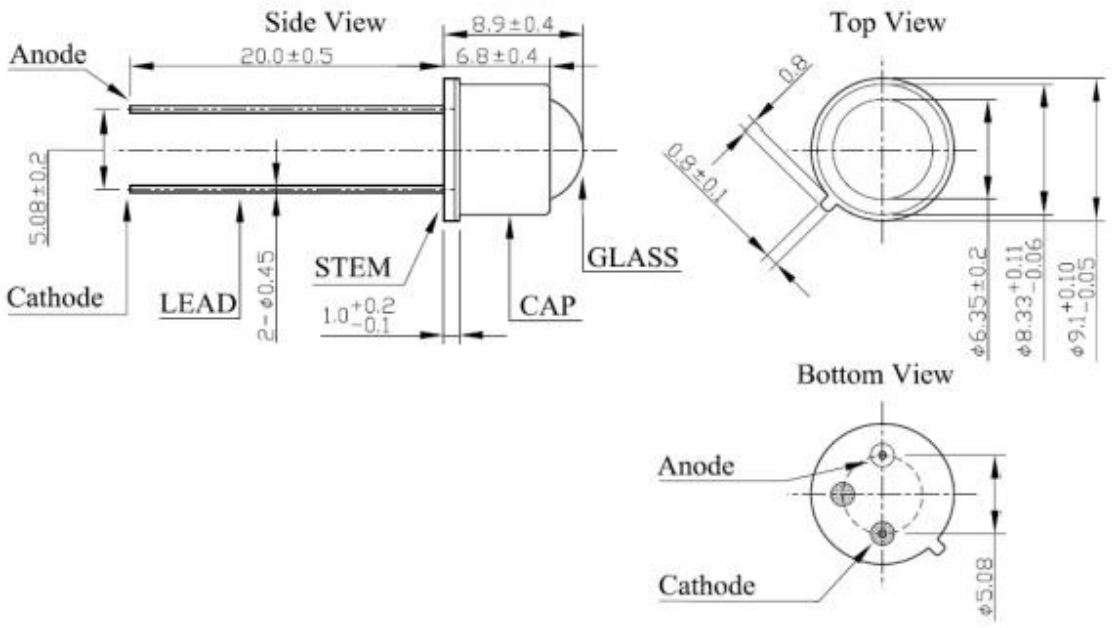
Outline Dimensions

TO39



Dimensions are subject to change for without notice. **all dimensions in mm**

Precautions

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