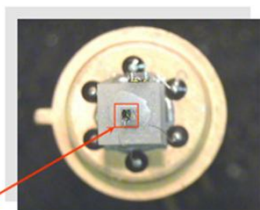




Features

- ☺ Peak emission wavelength: 3.05 μm
- ☺ Narrow Spectrum emission
- ☺ High radiant output power
- ☺ Narrow directivity
- ☺ High speed response



LED CHIP

Applications

- ☺ Light source for C_2H_2 and HCN gas

Accessories (optional)

- Driver for LEDs with built-in cooler
DLT-27M or DLT-37M

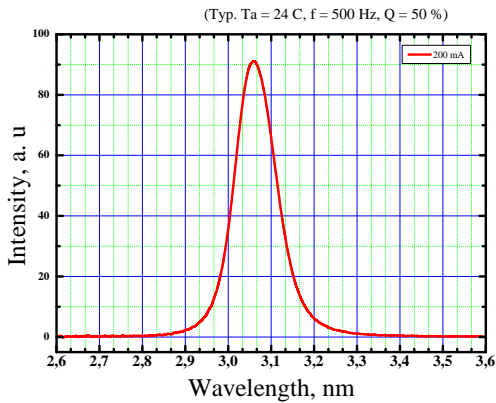
Absolute maximum ratings ($T_a=25\text{ }^\circ\text{C}$, unless otherwise noted)

Package	Parameter	Symbol	Value	Unit
TO-5	Reverse voltage	V_r	0.3	V
	Forward current (Duty ratio = 50 %)	I_f	200	mA
	Pulse forward current (Pulse width = 2.0 μs , Duty ratio = 10 %)	I_{fp}	2	A
	Forward current derating rate ($T_a > 25\text{ }^\circ\text{C}$)	IFT	2.1	mA/ $^\circ\text{C}$
	Power dissipation	P	8	μW
	Operating temperature	T_{opr}	-15 to 50	$^\circ\text{C}$
	Storage temperature	T_{stg}	-40 to 100	$^\circ\text{C}$
	Weight	m	3.65	g
	Size	D	15.0	mm
		H	23.0	

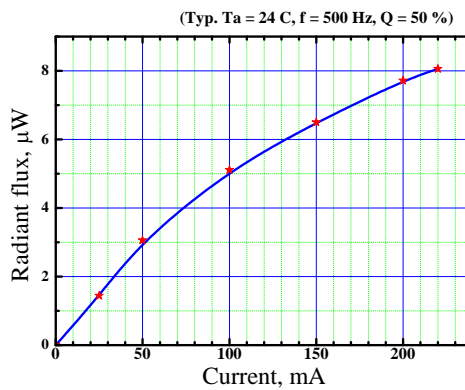
Electrical and optical characteristics (Ta=25 °C)

Parameter	Symbol	Condition	LED-305 - NS			Unit
			Min.	Typ.	Max.	
Peak emission	λ_p	$I_F=50 \text{ mA}$	3.03	3.05	3.07	μm
Spectral half width	$\Delta\lambda$	$I_F=200 \text{ mA}$	100	120	140	nm
Radiant flux	ϕ_e	$I_F=200 \text{ mA}$	7	8	9	μW
Forward voltage	V_F		0.5	0.6	0.8	V
Reverse current	I_R	$V_R=0.3 \text{ V}$	3	5	6	mA

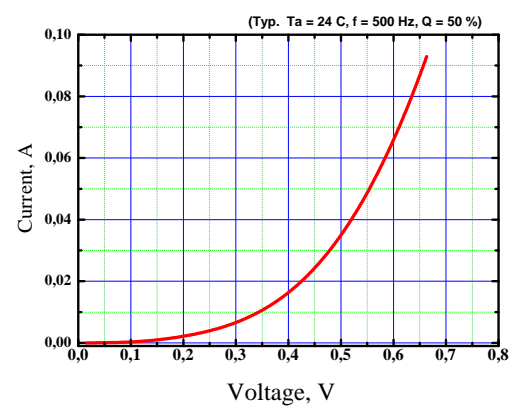
Emission spectrum



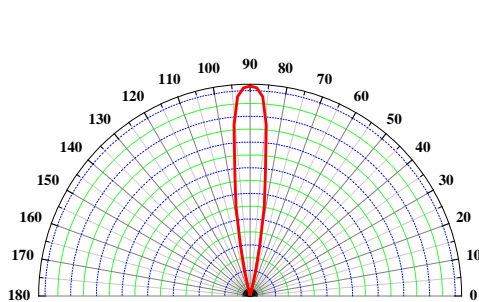
Radiant flux vs. forward current



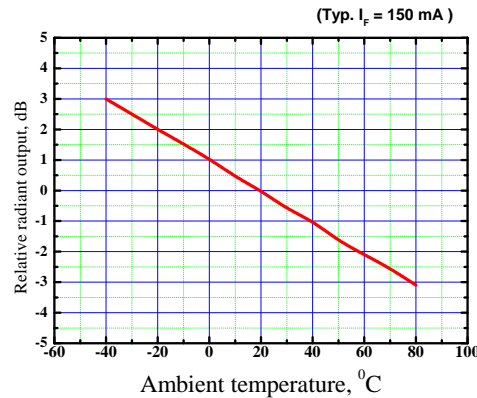
Forward current vs. forward voltage



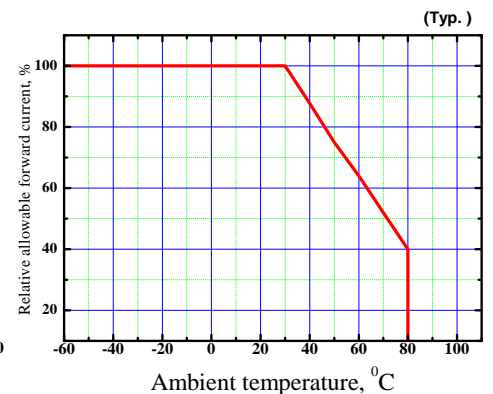
Directivity



Radiant output vs. ambient temperature



Allowable forward current vs. ambient temperature



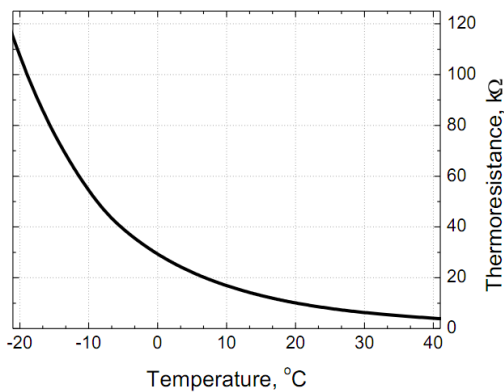
LIGHT-EMITTING DIODE

LED-305 - NS - TEC

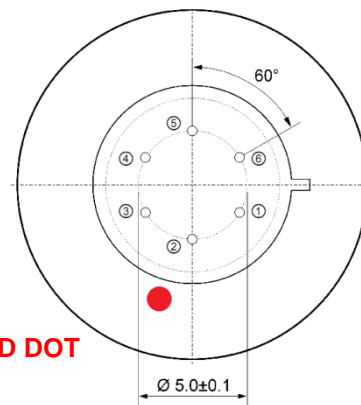
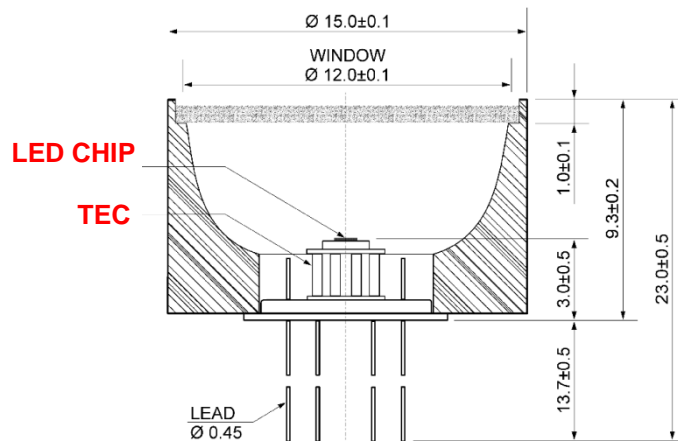
TEC TO506.1MC0400710.TB103 parameters (without load)

Parameter	Symbol	Value	Unit
Current power (Δt_{max})	I_{max}	1.50	A
Voltage (Δt_{max})	U_{max}	0.80	V
Cooling energy	Q_{max}	1.30	W
Temperature range (vacuum)	ΔT_{max}	70	K
Termistor resistance ($t = 20\text{ }^{\circ}\text{C}$)	R_t	10.00	k Ω

Thermoresistance vs. temperature



Dimensional outlines (unit: mm)



Pin	Description
①	TEC (anode)
②	LED (anode)*
③	LED (cathode)*
④	Termistor TC103
⑤	
⑥	TEC (cathode)

*Special order: the pin polarity can be changed.