

Infrared LED

L7022

High power LED array for spatial light transmission



Features

- Small package
- High radiant output power
- Directivity suitable for automobile VICS

Applications

- Spatial light transmission (automobile VICS)

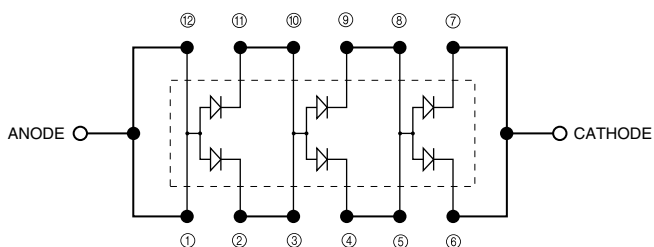
■ Absolute maximum ratings (Ta=25 °C, following figure external wiring diagram)

Parameter	Symbol	Condition	Value	Unit
Forward current	I_F		160	mA
Reverse voltage	V_R		4	V
Pulse forward current	I_{FP}	Pulse width =10 μ s Duty ratio =1 %	1.6	A
Operating temperature	T_{opr}		-30 to +85	°C
Storage temperature	T_{stg}		-40 to +110	°C

■ Electrical and optical characteristics (Ta=25 °C, following figure external wiring diagram)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Peak emission wavelength	λ_p	$I_F=100$ mA	830	870	890	nm
Spectral half width	$\Delta\lambda$	$I_F=100$ mA	-	40	-	nm
Forward voltage	V_F	$I_F=100$ mA	-	4.6	5.0	V
Pulse forward voltage	V_{FP}	$I_F=900$ mA	-	7.3	8.3	V
Reverse current	I_R	$V_R=4$ V	-	-	10	μ A
Radiant flux	ϕ_e	$I_F=100$ mA	55	78	-	mW
Pulse radiant strength	I_{ep}	$I_F=900$ mA	1350	1600	-	mW/sr
Cut-off frequency	f_c	$I_F=50$ mA + 1 mAp-p	7	12	-	MHz

■ External wiring diagram

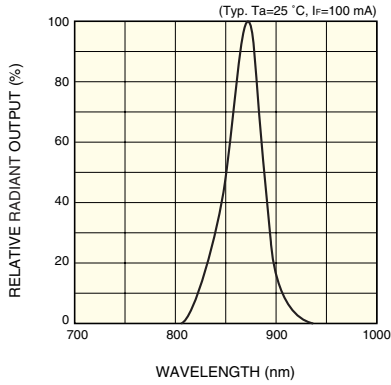


Bold solid line: External wiring
Thin solid line: Internal wiring
Broken line : Molded area

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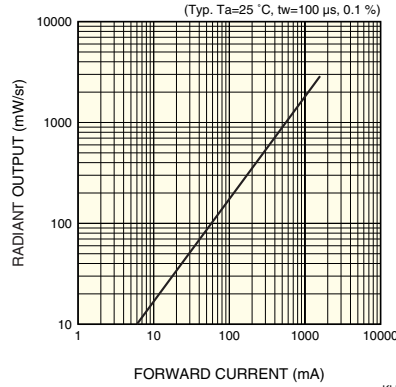
SOLID STATE DIVISION

■ Emission spectrum



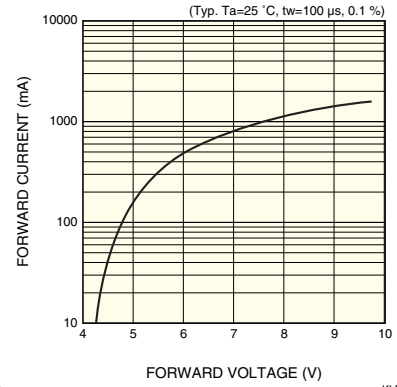
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■ Radiant output vs. forward current



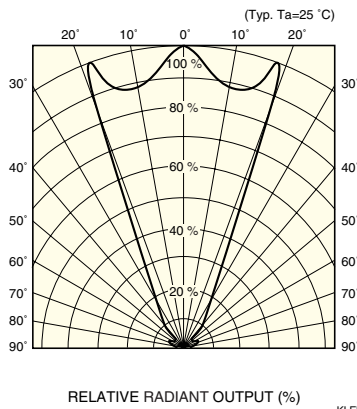
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■ Forward current vs. forward voltage



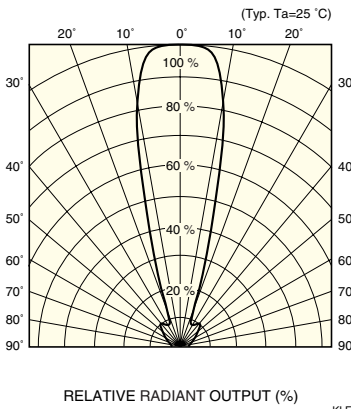
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■ Directivity (direction in short side)



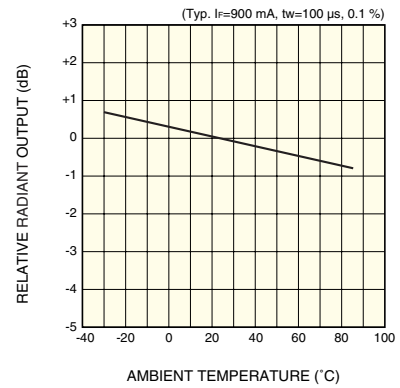
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■ Directivity (direction in long side)



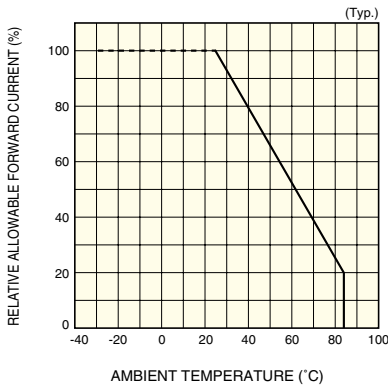
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■ Radiant output vs. ambient temperature



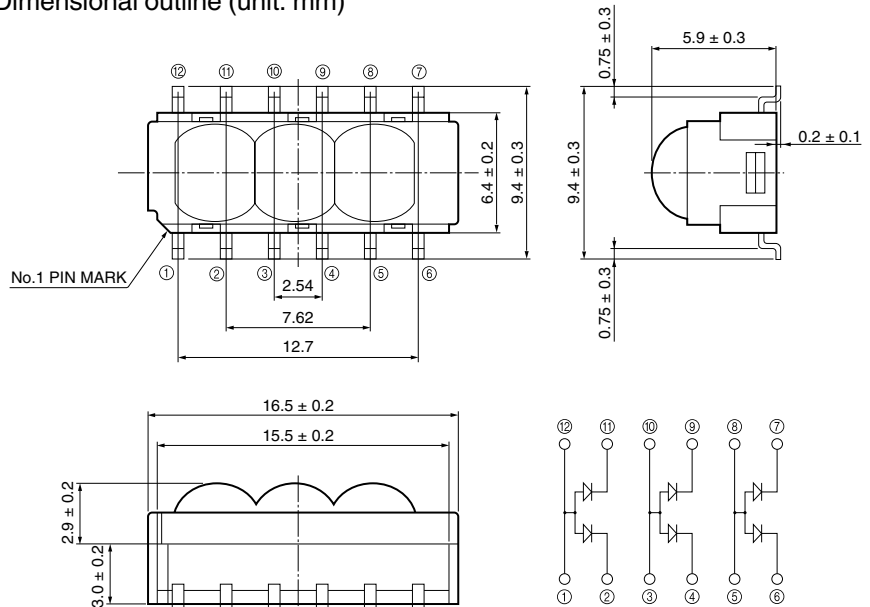
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■ Allowable forward current vs. ambient temperature



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■ Dimensional outline (unit: mm)



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