

Multi Wavelength LEDs

KED694M31D

Characteristics

- Red and IR emitters in a single package
- Epoxy mold
- Direct modulation

Applications

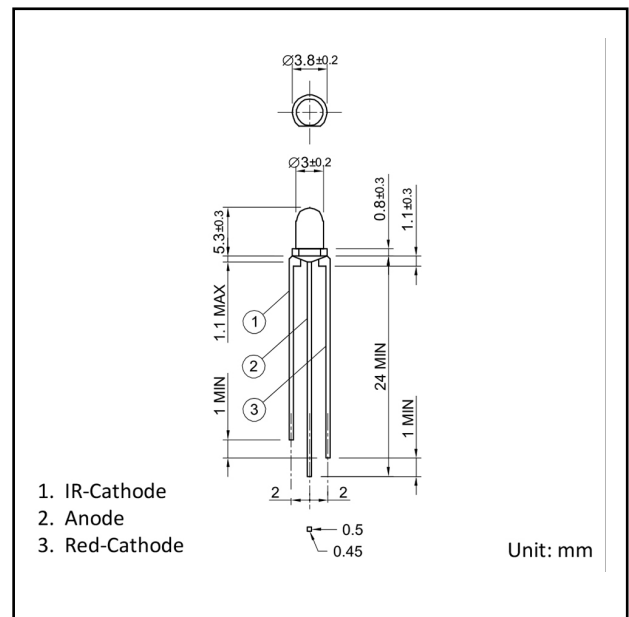
- Bull recognition
- Color sensors

Chip Material

- Red : GaAlAs
- Infrared : GaAs

Package

- MOLD



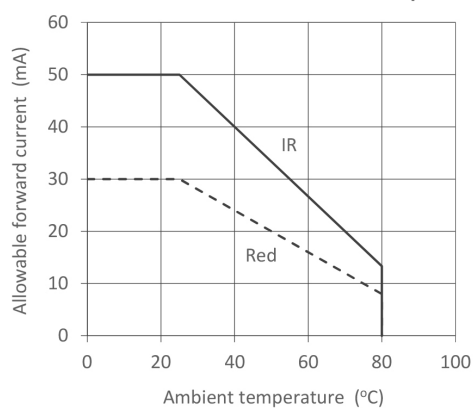
Absolute Maximum Ratings

Parameter	Symbol	Wavelength	Value	Unit	Conditions
Reverse voltage	V_R	Red	6	V	-
		Infrared	6		
Forward current	I_F	Red	30	mA	$T_a=25$
		Infrared	50		
Peak forward current	I_{FP}	Red	0.3	A	Pulse width=100 μ s Duty ratio=0.1%
		Infrared	0.5		Puls width=100 μ s Duty ratio=0.1%
Power dissipation	P_D	Red	70	mW	100mW max.in total
		Infrared	70		
Operating temperature	T_{opr}	-	-20 to +80		Avoid dew condensation
Storage temperature	T_{stg}	-	-30 to +100		Avoid dew condensation
Soldering temperature	T_{sol}	-	260		Soldering time less than 5 seconds

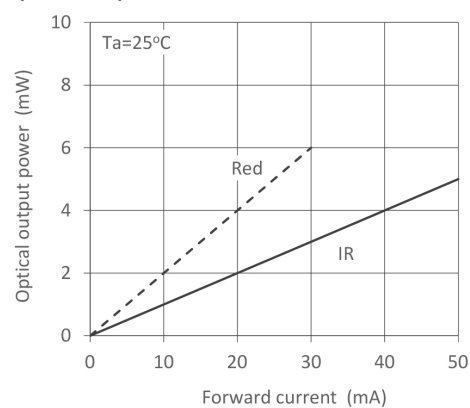
Electrical and Optical characteristics ($T_a=25$ unless otherwise noted)

Parameter	Symbol	Wavelength	Min.	Typ.	Max.	Unit	Conditions
Reverse Current	I_R	-	-	-	10	μ A	$V_R=6V$
Forward voltage	V_F	Red	-	1.7	2.0	V	$I_F=20mA$
		Infrared	-	1.2	1.4		
Optical output power	P_O	Red	-	4.0	-	mW	$I_F=20mA$
		Infrared	-	2.0	-		
Peak wavelength	λ_p	Red	-	660	-	nm	$I_F=20mA$
		Infrared	-	940	-		
Spectral width		Red	-	20	-	nm	$I_F=20mA$
		Infrared	-	50	-		
Half angle	2	Red	-	38	-	deg.	$I_F=20mA$
		Infrared	-	21	-		

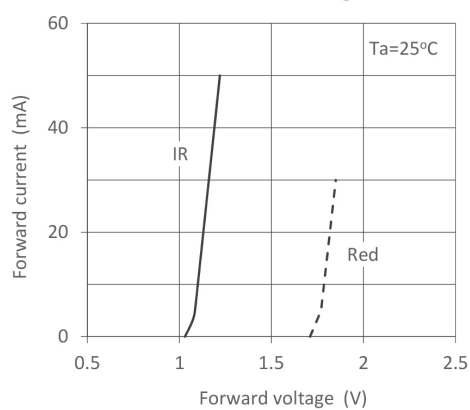
Allowable Forward Current-Ambient Temperature



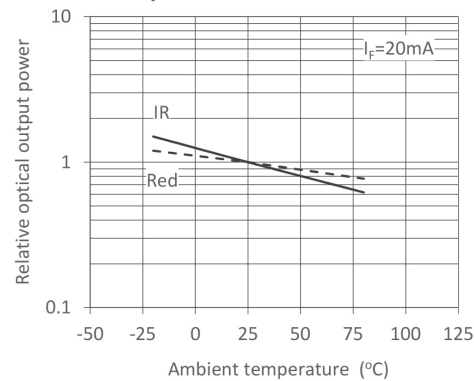
Optical Output Power - Forward Current



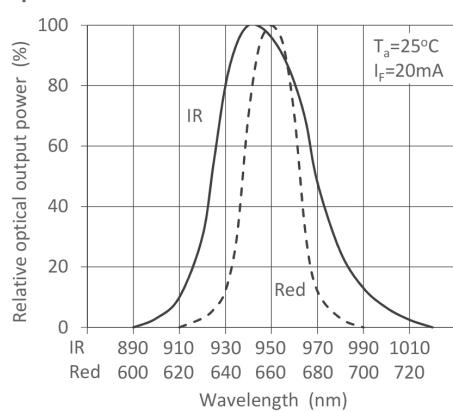
Forward Current - Forward Voltage



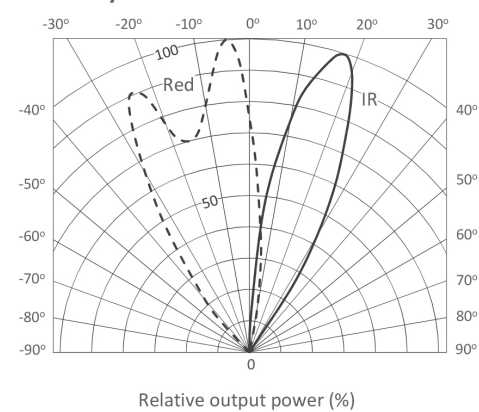
Relative Optical Output Power - Ambient Temperature



Spectral Distribution



Directivity



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