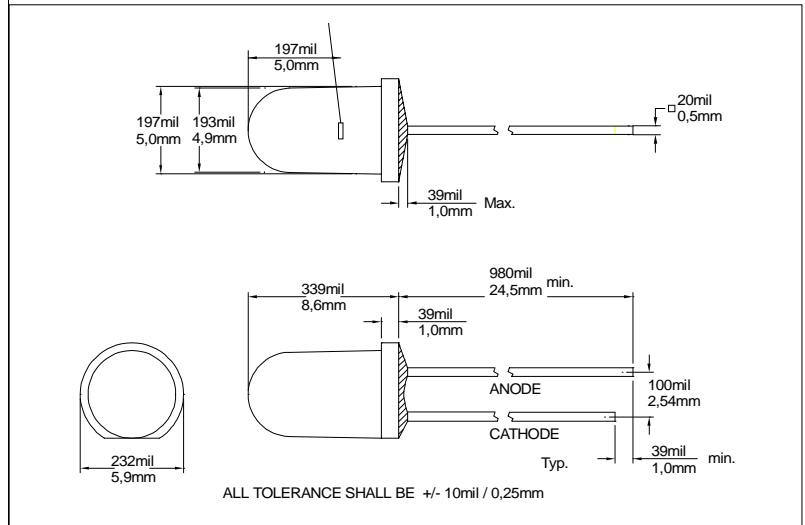


Infrared Light Emitting Diode IRED

810nm/40ns FQR5402

Features

- * Standard design LED for general purpose
Based on double hetero structure of GaAlAs
- * Fast switching time : typical <40ns
- * Water-clear package style without stand-off
- * High power for T1 3/4 case with 17° full angle
- * Application : Open-Air communication / IrDa
IR-Flash-Lights
Medical instruments
Light interrupter and switches
Night vision and security system
CCD-illumination



Electrical and optical characteristics and absolute maximum ratings (Ta=25°C unless otherwise noted)

Symbol	Parameter	MIN	Typ	MAX	Unit	Test conditions
I _F	DC Forward current			100	mA	
I _{PEAK}	Peak Forward current			1500	mA	T _p < 10μsec. ; T=1:100 ; R _{therm} < 100 K/W
V _F	Forward Voltage	1,3	1,7	2,1	V	I _F = 50mA
V _R	Reverse Voltage	5			V	I _{rev} = 100μA
λ _{Peak}	Peak Wavelength	805	810	815	nm	I _F = 50mA
Δλ _{0,5}	Bandwidth of half power	25	30		nm	I _F = 50mA
t _f	Fall time		40		ns	I _F = 100mA
t _r	Rise time		40		ns	I _F = 100mA
F _E	Total Power Output	9	16		mW	I _F = 50mA
I _E	Radiant Intensity	180	250		mW/sr	I _F = 100mA
D	Diameter of light emitting point		4,5		mm	I _F = 20mA, 63% of radiant output (IEC825)
A	Chip size		0,13		mm ²	Chip size : 360μmX360μm
2Φ _{0,5}	Emission Angle	14	17	22	deg.	Φ _E = 50%
TK _{VF}	Temp.Coeff. of Forward Voltage		- 2		mV/K	
TK _F	Temp.Coeff. of Radiant Power		- 0,4		%/K	
T _{Operating}	Operating Temperature	- 25		85	°C	
T _{Storage}	Storage Temperature	- 25		85	°C	
T _{Soldering}	Soldering Temperature			260	°C	2mm from case @ 5 sec.
Θ _{j-PIN}	Thermal Resistance		450		K/W	
P _{tot}	Total Power Dissipation			230	mW	derate above 45°C 2,5mW/K

Order Informations :

FQR5402 Bulk
FQR5402TR Taped on Reel / 1000 pcs. standard reel

Fietje reserves the right to make changes at any time in order to improve design and to supply the best product possible, contact Fietje for latest device specification sheets before using.