Infrared Light Emitting Diode IRED 870nm/20ns/30° FQT5501

Features

* Standard design LED for general purpose
  Based on double hetero structure of GaAlAs

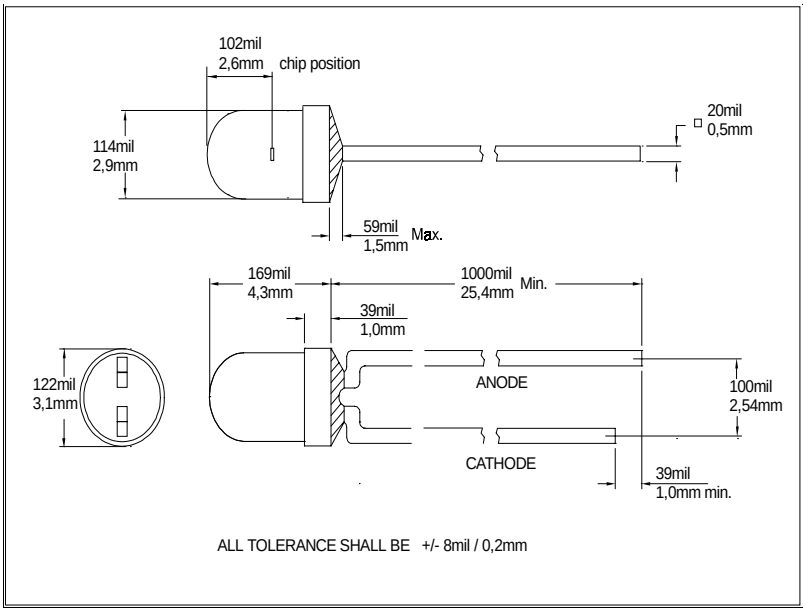
* Fast switching time : typical <20ns

* High cut-off frequency of >20Mhz @-3dB

* High power for T1 case with 30° full angle

* Water-clear package style without stand-off

* Application : Open-Air communication / IrDa
  IR-Flash-Lights
  Medical instruments
  Light interrupter and switches



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	Tp< 10µsec. ; T=1:100 ; Rtherm < 100 K/W
V_F	Forward Voltage	1,3	1,5	2,1	V	IF = 50mA
V_R	Reverse Voltage	5			V	Irev = 100µA
λ_{Peak}	Peak Wavelength	860	870	885	nm	IF = 50mA
$\Delta\lambda_{0,5}$	Bandwidth of half power	25	30		nm	IF = 50mA
t_f	Fall time	10	18		ns	IF = 100mA
t_r	Rise time	10	20		ns	IF = 100mA
F_E	Total Power Output	20	26		mW	IF = 100mA
I_E	Radiant Intensity	95	160		mW/sr	IF = 100mA
D	Diameter of light emitting point		2,3		mm	IF = 20mA, 63% of radiant output (IEC825)
A	Chip size		0,13		mm²	Chip size : 360µmX360µm
$2\Phi_{0,5}$	Emission Angel	25	30	35	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.
$\Theta_{j\text{-}PIN}$	Thermal Resistance		450		K/W	
P_{tot}	Total Power Dissipation			210	mW	derate above 45°C 2,5mW/K

Order Informations :

FQT5501	Bulk
FQT5501TR	Taped on Reel / 2000 pcs. standard reel
FQT5501TA	Taped in AMMOPACK

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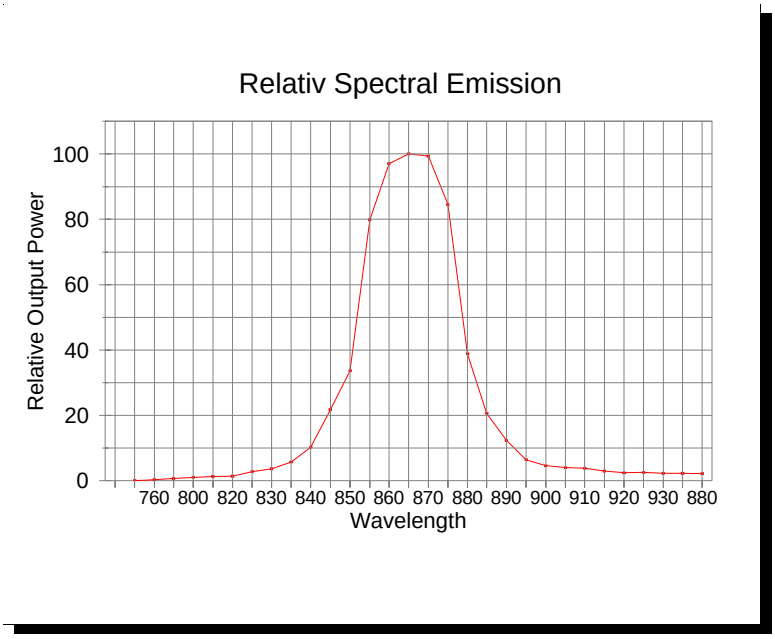

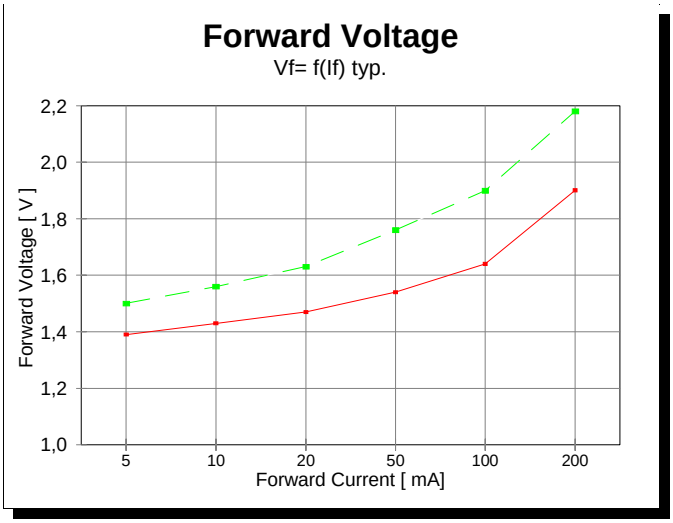

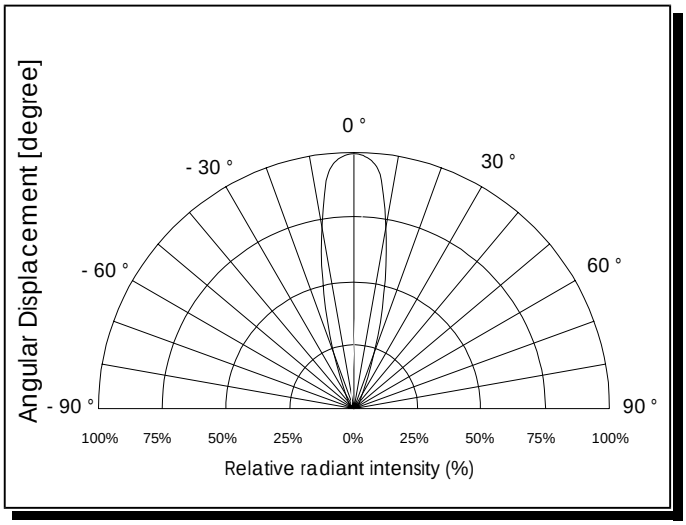

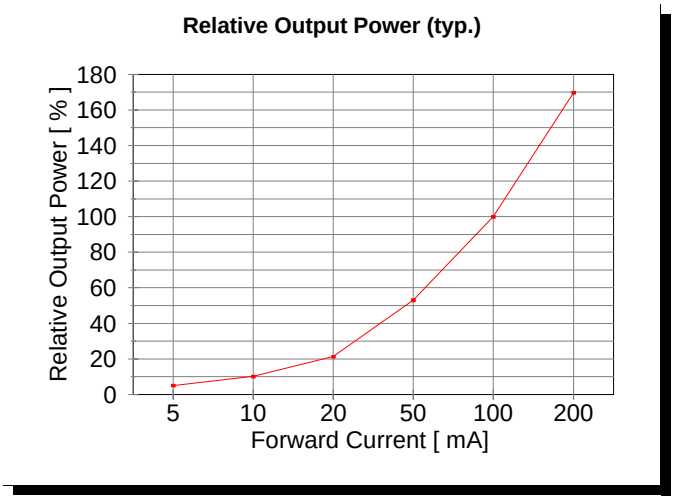

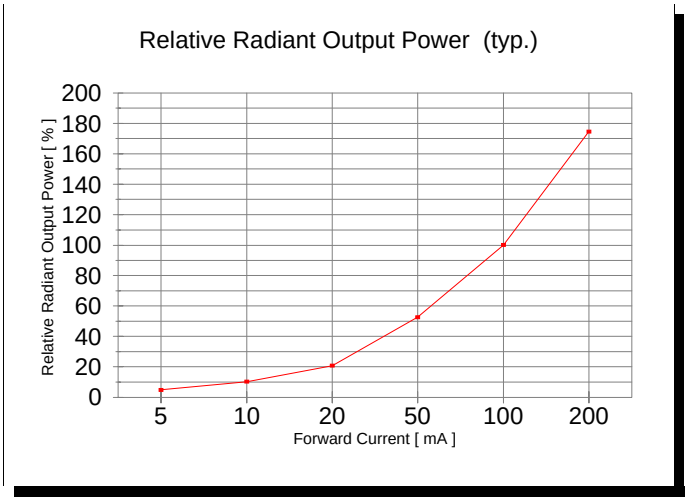

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