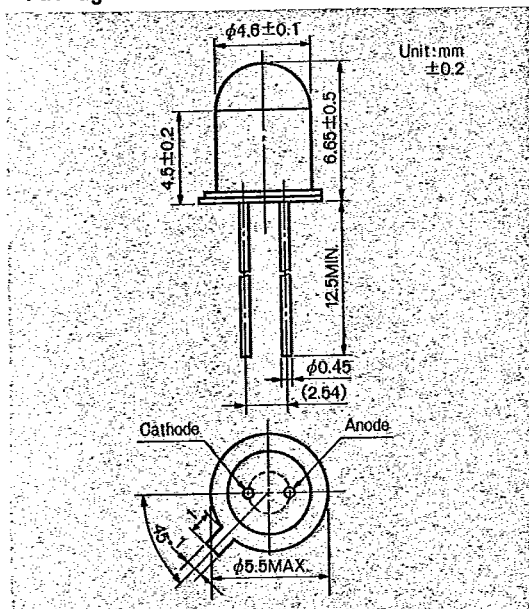


STANLEY**BN101**

T-41-11

**STANLEY
INFRARED LED****■ Package Dimensions****■ FEATURES**

- (1) High emission output
(Typ. 6.5mW/sr at $I_F = 20\text{mA}$)
- (2) High directivity type
- (3) Hermetic sealing TO-18, High reliability

■ APPLICATIONS

- (1) Photoelectric switch, Photoelectric counter
- (2) Card and tape readers
- (3) Edge monitor, Level control
- (4) Smoke detector, Photoisolator
- (5) Infrared ray applied devices

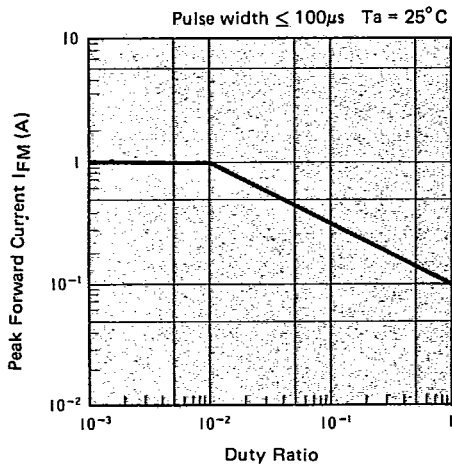
■ Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

Item	Symbol	Maximum Ratings	Unit
Power Dissipation	P_d	150	mW
Forward Current	I_F	100	mA
Peak Forward Current*	I_{FM}	1000	mA
Reverse Voltage	V_R	5	V
Operating Temperature	T_{opr}	$-30 \sim +125$	$^\circ\text{C}$
Storage Temperature	T_{stg}	$-30 \sim +125$	$^\circ\text{C}$

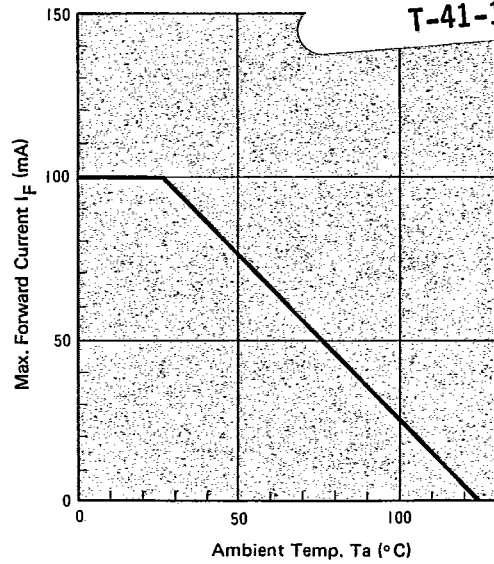
* I_{FM} Condition: $t_w \leq 100\mu\text{s}$, Duty $\leq 1/100$ **■ Electro-Optical Characteristics ($T_a = 25^\circ\text{C}$)**

Item	Symbol	Min.	Typ.	Max.	Unit	Condition
Forward Voltage	V_F	—	1.2	1.5	V	$I_F = 20\text{mA}$
Reverse Current	I_R	—	—	10	μA	$V_R = 4\text{V}$
Junction Capacitance	C_o	—	90	—	pF	$V = 0$, $f = 1\text{MHz}$
Radiant Intensity	I_E	2.0	6.5	—	mW/sr	$I_F = 20\text{mA}$
Peak Spectral Wave Length	λ_p	—	925	—	nm	$I_F = 20\text{mA}$
Spectral Band width	$\Delta\lambda$	—	50	—	nm	$I_F = 20\text{mA}$

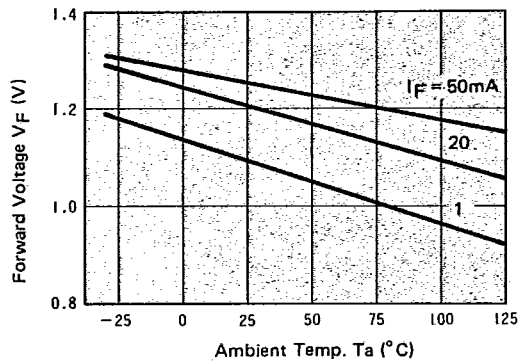
Peak Forward Current Vs. Duty Ratio



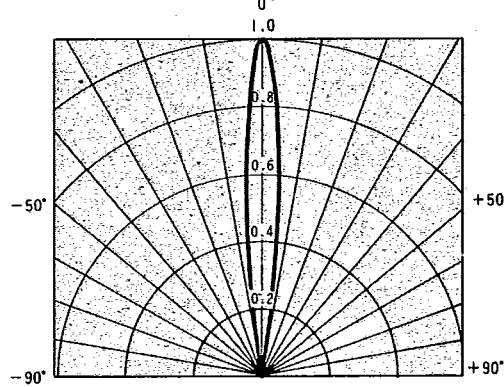
Max. Forward Current Vs. Ambient Temp.



Forward Voltage Vs. Ambient Temp.

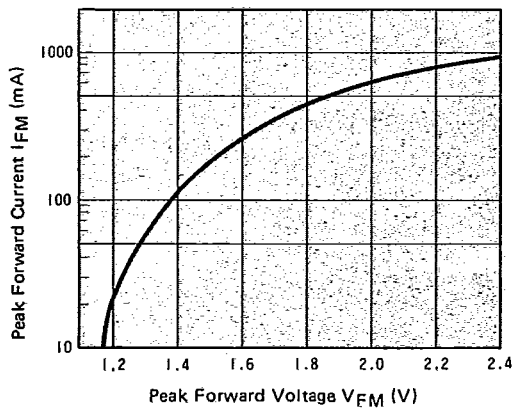


Directivity Characteristics

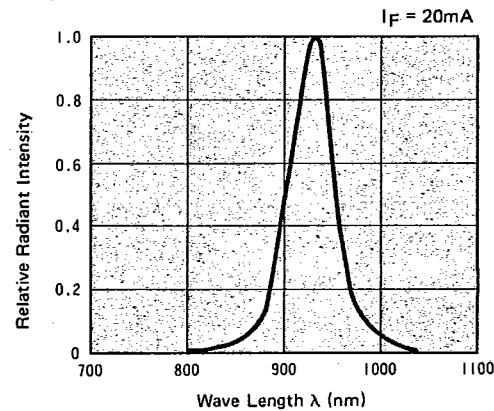


Peak Forward Current Vs. Peak Forward Voltage

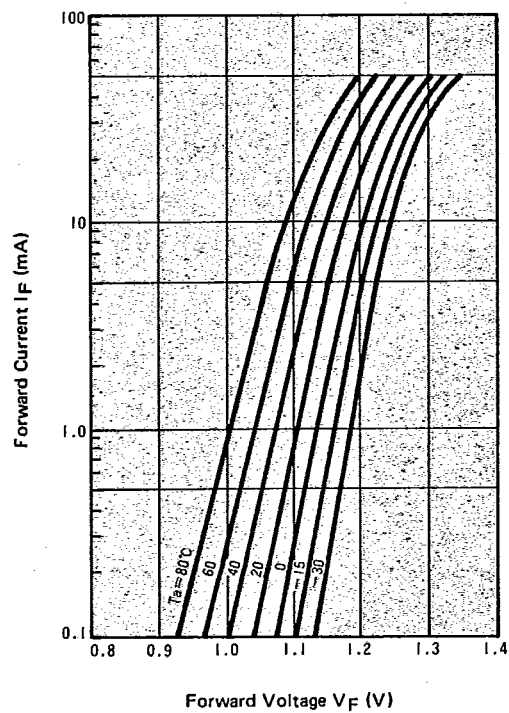
Pulse width $\leq 100\mu\text{s}$
Duty $\leq 1/100$



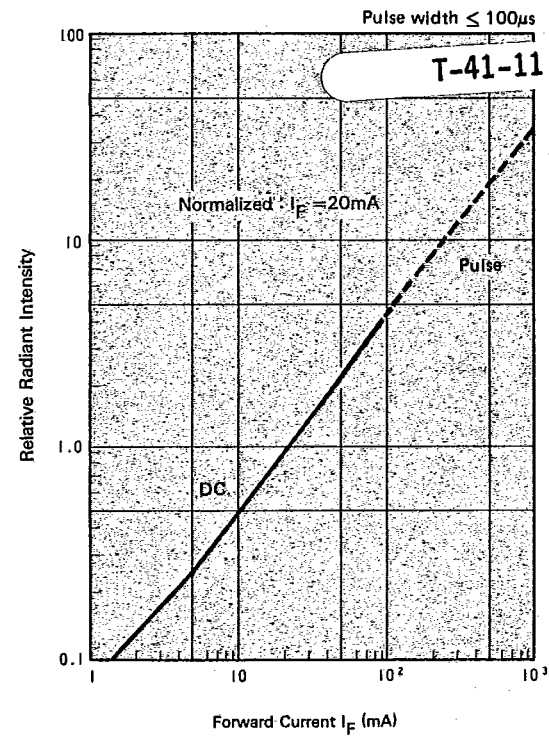
Spectral Distribution



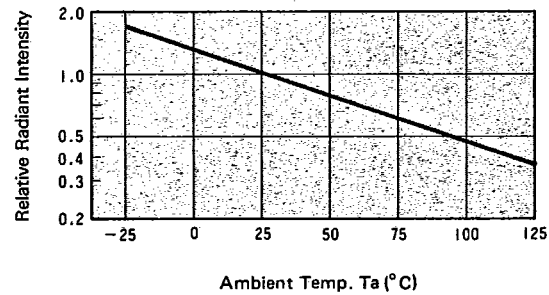
Forward Current Vs. Forward Voltage



Relative Radiant Intensity Vs. Forward Current



Relative Radiant Intensity Vs. Ambient Temp.



Relative Radiant Output Vs. Distance

