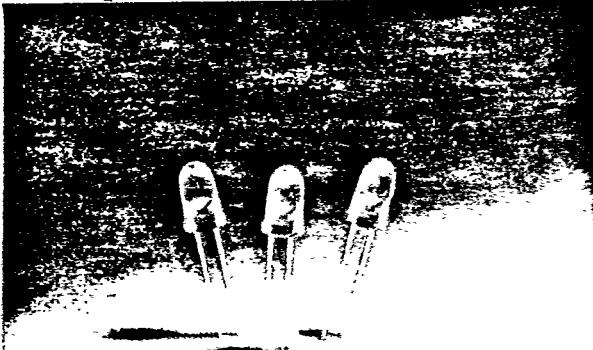


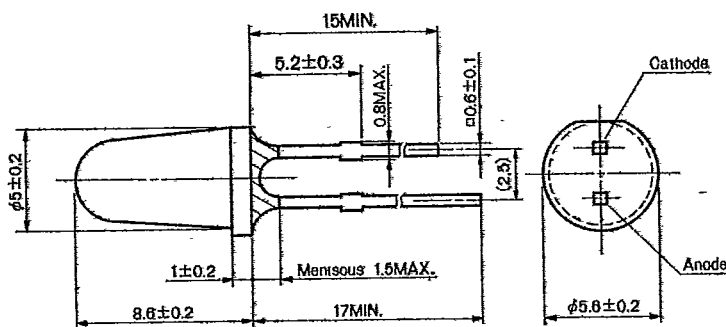
STANLEY**STANLEY
HI-SUPER BRIGHT
LED LAMP** $\phi 5(T-1 \ 3/4)$ TYPE**ER-300****ER-500****ER-700****SERIES**

The ER-300, 500 and 700 are red GaAlAs light-emitting diodes which provide an extremely high output. They are housed in a 5mm diameter molded package and feature a parabolic lens ideal for light output ensuring high-efficiency light radiation.

Drive is possible using minute currents or large current, depending upon the application. The ultra-high intensity ER Series diode lamps feature low cost and ease of application, making them usable in a myriad of LED applications.

FEATURES

- SERIES WITH INTENSITIES OF 300, 500, AND 700 MCD
- ULTRA-HIGH INTENSITY RED GaAlAs LEDs
- PARABOLIC LENS IDEAL FOR LIGHT EMISSION
- CLEAR, COLORLESS 5mm DIAMETER MOLDED PACKAGE
- WITHSTANDS HIGH CURRENTS AND PROVIDES HIGH RELIABILITY
- IDEAL FOR PULSED OPERATION
- LESS POWER CONSUMPTION AND SUITABLE FOR BATTERY-DRIVEN EQUIPMENT
- LONG LIFE AND HIGH RELIABILITY
- DRIVEN BY LESS POWERED ICs AND COST-SAVING
- MOST SUITABLE FOR OPTICAL COMMUNICATION SYSTEMS

Package Dimensions—Unit in mm

T-41-21

Absolute Maximum Ratings (Ta=25°C)

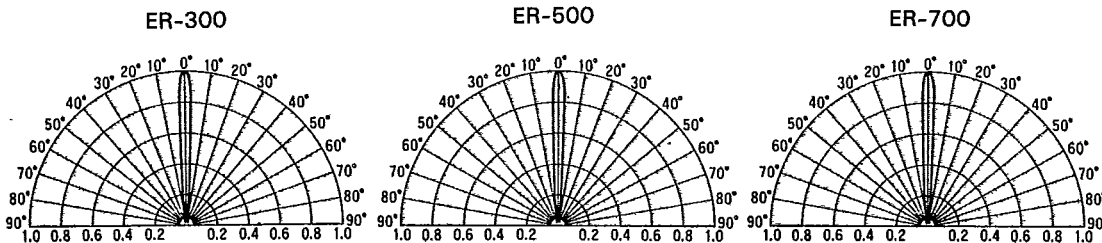
Parameter	Symbol	Red			Green		Yellow		Orange	Units
		BR	AR	PR	BG	PG	PY	AY	AA	
* Forward Current	I_F	50								mA
* Peak Forward Current	I_{FM}	300								mA
Reverse Voltage	V_R	4								V
Power Dissipation	P_d	100								mW
Operating Temperature	T_{opr}	-30 ~ + 85								°C
Storage Temperature	T_{stg}	-30 ~ + 100								°C
Lead Soldering Temperature		260°C for 5 seconds (3.0mm from body)								

* The currents are derated above Ta=25°C at 0.67mA/°C * I_{FM} is for $t_w \leq 1\text{msec}$ and Duty $\leq 1/20$

Electro-Optical Characteristics (Ta=25°C)

Type No.	Chip		Lens	$I_v(\text{mcd})$		at I_F (mA)	Peak Wave Length $\lambda_p(\text{nm})$	Spectral Line Half Width $\Delta\lambda(\text{nm})$	$V_F(\text{V})$		at I_F (mA)	at $V_R 4\text{V}$ $I_a(\mu\text{A})$	Capacitance Co(pF)
	Material	Emitted Color		Min.	Typ.				Typ.	Max.			
ER-300	GaAlAs	Red	W.C	200	300	20	660	30	1.7	2.0	20	100	50
ER-500	GaAlAs	Red	W.C	400	500	20	660	30	1.7	2.0	20	100	50
ER-700	GaAlAs	Red	W.C	600	700	20	660	30	1.7	2.0	20	100	50

SPATIAL DISTRIBUTION

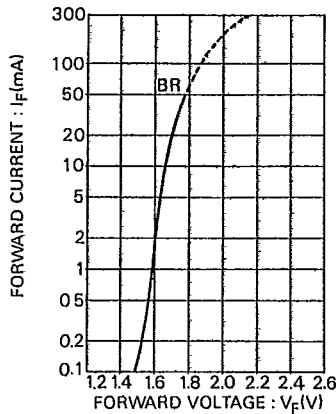


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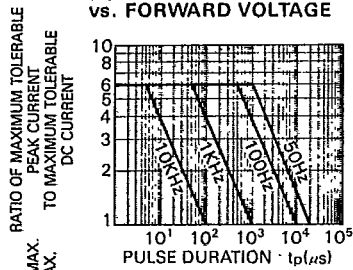
RED

I I STANLEY CO INC

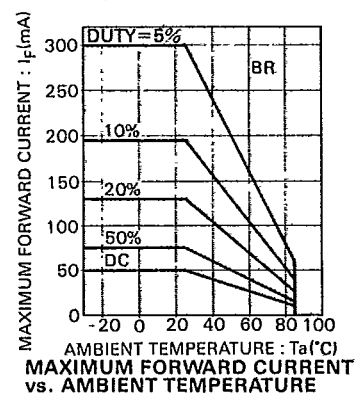
25E D



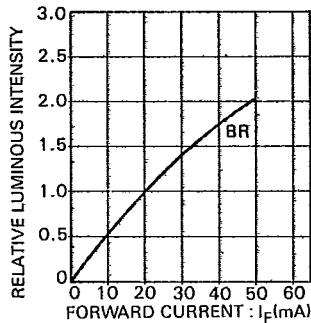
FORWARD CURRENT vs. FORWARD VOLTAGE



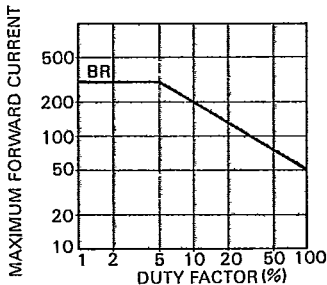
MAXIMUM TOLERABLE PEAK CURRENT vs. PULSE DURATION



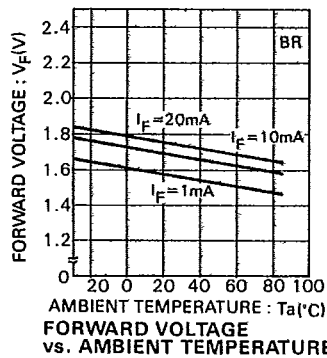
MAXIMUM FORWARD CURRENT vs. AMBIENT TEMPERATURE



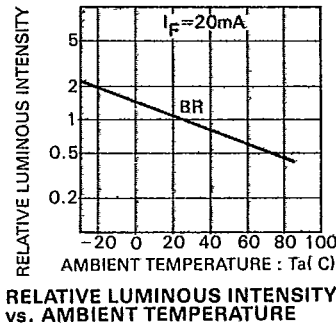
RELATIVE LUMINOUS INTENSITY vs. FORWARD CURRENT



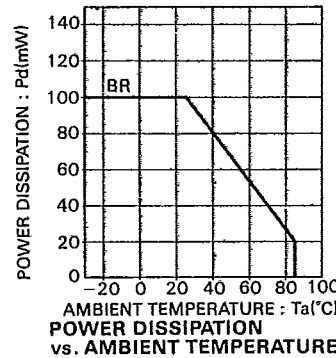
MAXIMUM FORWARD CURRENT vs. DUTY FACTOR



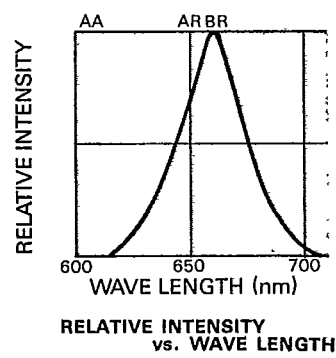
FORWARD VOLTAGE vs. AMBIENT TEMPERATURE



RELATIVE LUMINOUS INTENSITY vs. AMBIENT TEMPERATURE



POWER DISSIPATION vs. AMBIENT TEMPERATURE



RELATIVE INTENSITY vs. WAVE LENGTH