T-41-23

STANLEY

STANLEY SUPER BRIGHT LED LAMP

RECTANGLE TYPE 2.4×7.2mm TYPE

7841REC | 7851REC SERIES

■SELECTION GUIDE

COLOR	MATERIAL	PART NUMBER
Red	GaAlAs	SBR 7841REC, 7851REC
	GaP	SPR 7841REC, 7851REC
Green	GaP	SPG 7851REC
Yellow	GaP	SPY 7841REC, 7851REC
	GaAsP/GaP	SAY 7841REC, 7851REC

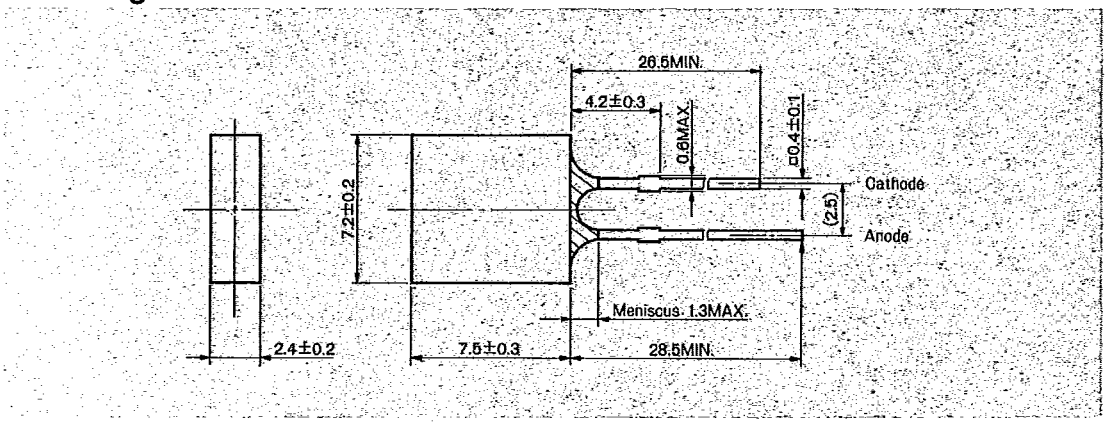
■FEATURES

- AVAILABLE IN 3 COLORS; RED, GREEN AND YELLOW
- 2.4 x 7.2mm FLAT RECTANGULAR LIGHT EMITTING SURFACE
- FLAT LIGHT-EMITTING SURFACE WITH UNIFORM ILLUMINATION
- LOW CURRENT DRIVE, DIRECTLY COMPATIBLE WITH IC
- QUICK RESPONSE, ALLOWING PULSED OPERATION
- HIGH RELIABILITY

■DESCRIPTION

The rectangular type LEDs are most suitable for the use requiring thin and special configuration. As these rectangular types feature high visibility and three different colors, these can find wide applications when used in line besides the use for display as single element.

■Package Dimensions–Unit in mm



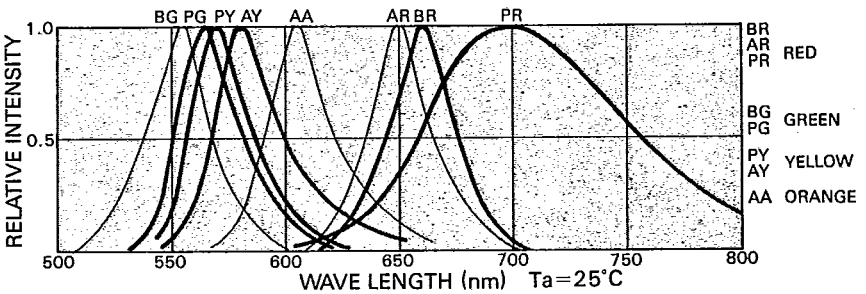
■Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Red			Green		Yellow		Orange	Units
		BR	AR	PR	BG	PG	PY	AY	AA	
Forward Current	I_F	50		30		50	50	50		mA
Peak Forward Current	I_{FM}	300		100		100	100	100		mA
Reverse Voltage	V_R	4			4		4			V
Power Dissipation	Pd	100		75		125	125	125		mW
Operating Temperature	Topr	−30~+ 85			−30~+ 85		−30~+ 85			°C
Storage Temperature	Tstg	−30~+100			−30~+100		−30~+100			°C
Lead Soldering Temperature		260°C for 5 seconds (3.0mm from body)								

■Electro-Optical Characteristics (Ta=25°C)

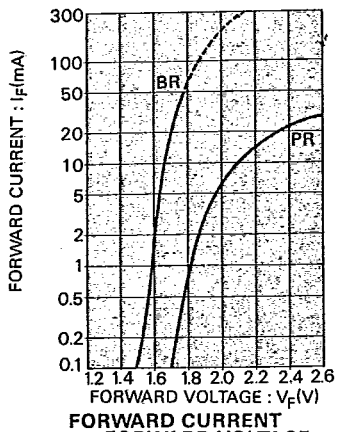
T-41-23

Type No.	Chip		Lens	Iv(mcd)		at I_F (mA)	Peak Wave Length λp(nm)	Spectral Line Half Width Δλ(nm)	V_F(V)		at I_F (mA)	at V_R4V I_R(μA)	Capacitance Co(pF)
	Material	Emitted Color		Min.	Typ.				Typ.	Max.			
SBR7851REC(41REC)	GaAlAs	Red	C.S.D (W.S.D)	1.5	3.0	20	660	30	1.7	2.0	20	100	50
SPR7851REC(41REC)	GaP	Red	C.S.D (W.S.D)	0.3	0.5	10	700	100	2.1	2.5	10	100	70
SPG7851REC	GaP	Green	C.S.D	1.5	3.0	20	565	30	2.1	2.5	20	100	40
SPY7851REC(41REC)	GaP	Yellow	C.S.D (W.S.D)	2.0	4.0	20	570	30	2.1	2.5	20	100	40
SAY7851REC(41REC)	GaAsP/GaP	Yellow	C.S.D (W.S.D)	1.2	2.4	20	580	30	2.2	2.5	20	100	40

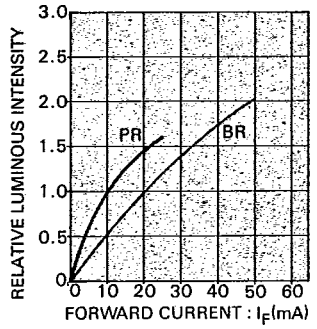


RELATIVE INTENSITY vs. WAVE LENGTH

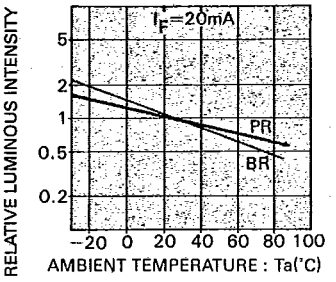
RED



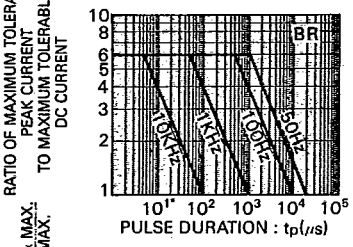
FORWARD CURRENT vs. FORWARD VOLTAGE

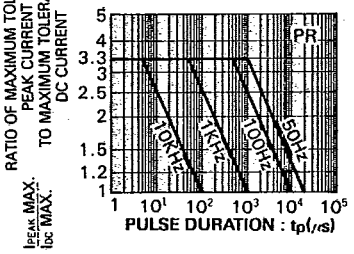


RELATIVE LUMINOUS INTENSITY vs. FORWARD CURRENT

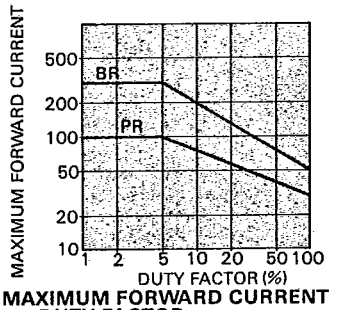


RELATIVE LUMINOUS INTENSITY vs. AMBIENT TEMPERATURE

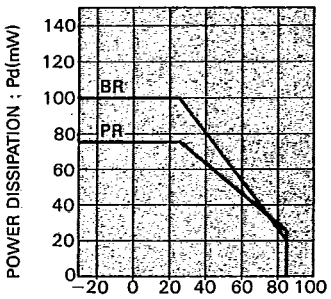




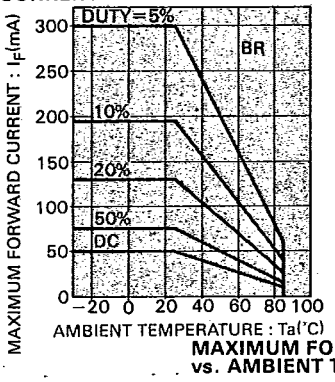
MAXIMUM TOLERABLE PEAK CURRENT vs. PULSE DURATION

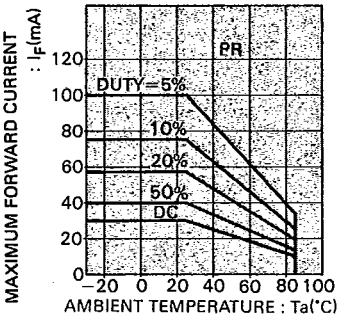


MAXIMUM FORWARD CURRENT vs. DUTY FACTOR

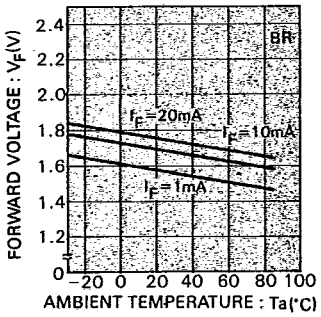


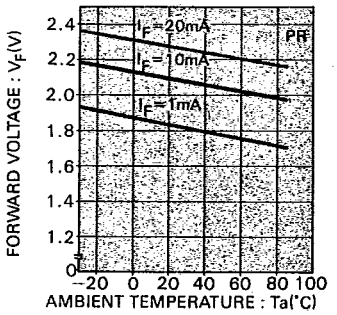
POWER DISSIPATION vs. AMBIENT TEMPERATURE





MAXIMUM FORWARD CURRENT vs. AMBIENT TEMPERATURE

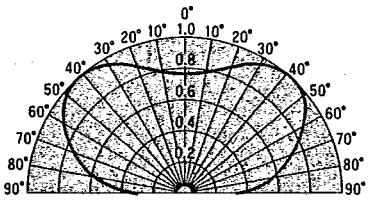




FORWARD VOLTAGE vs. AMBIENT TEMPERATURE

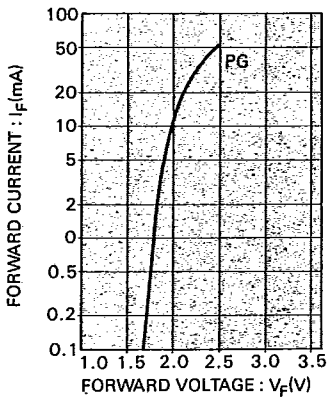
■ SPATIAL DISTRIBUTION

BR

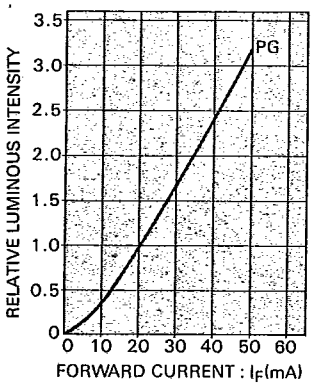


■GREEN

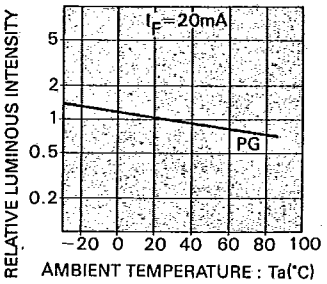
T-41-23



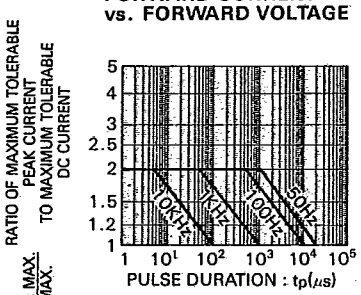
FORWARD CURRENT vs. FORWARD VOLTAGE



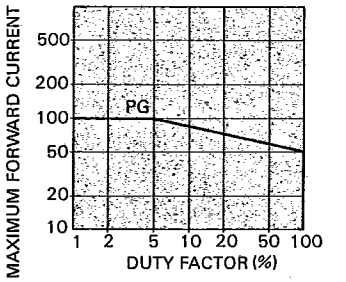
RELATIVE LUMINOUS INTENSITY vs. FORWARD CURRENT



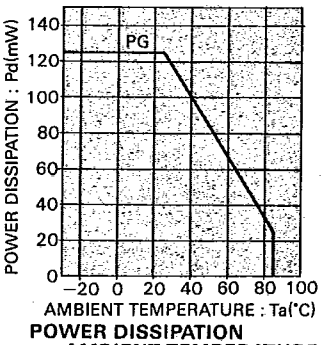
RELATIVE LUMINOUS INTENSITY vs. AMBIENT TEMPERATURE



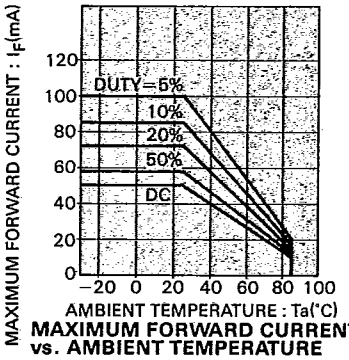
MAXIMUM TOLERABLE PEAK CURRENT vs. PULSE DURATION



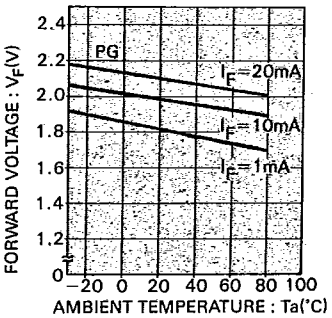
MAXIMUM FORWARD CURRENT vs. DUTY FACTOR



POWER DISSIPATION vs. AMBIENT TEMPERATURE



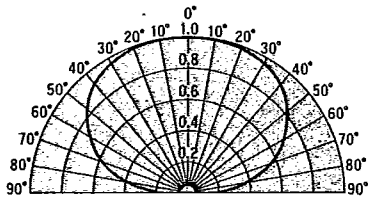
MAXIMUM FORWARD CURRENT vs. AMBIENT TEMPERATURE



FORWARD VOLTAGE vs. AMBIENT TEMPERATURE

■SPATIAL DISTRIBUTION

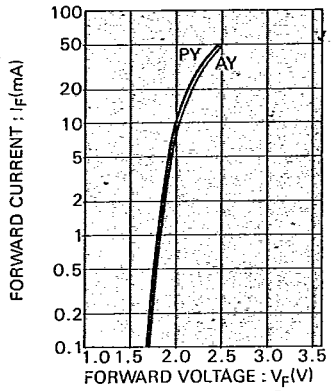
PG



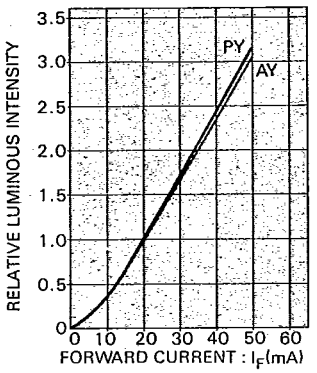
LED LAMP

YELLOW

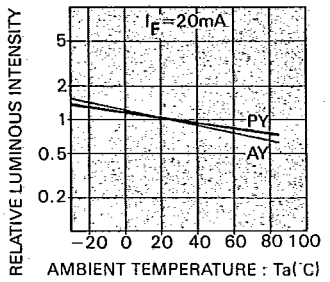
T-41-23



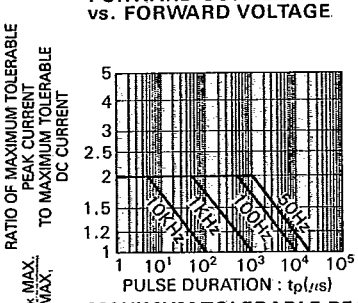
FORWARD CURRENT vs. FORWARD VOLTAGE



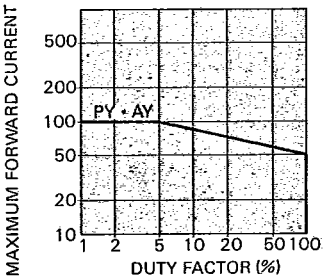
RELATIVE LUMINOUS INTENSITY vs. FORWARD CURRENT



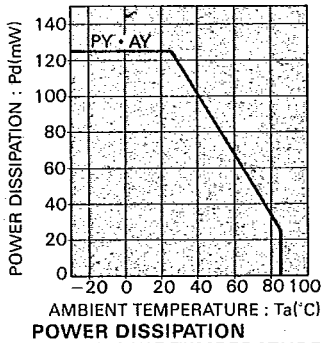
RELATIVE LUMINOUS INTENSITY vs. AMBIENT TEMPERATURE



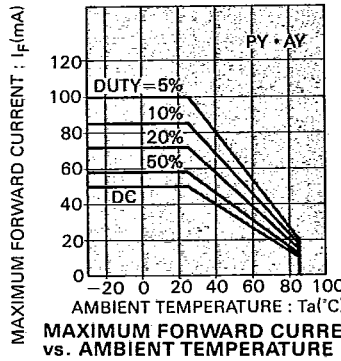
MAXIMUM TOLERABLE PEAK CURRENT vs. PULSE DURATION



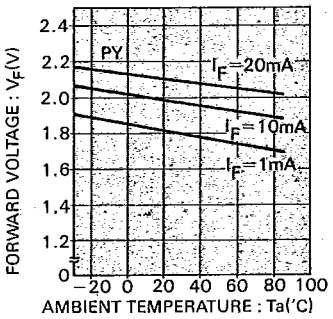
MAXIMUM FORWARD CURRENT vs. DUTY FACTOR

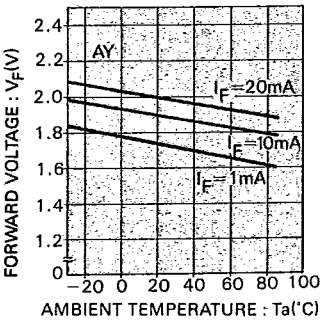


POWER DISSIPATION vs. AMBIENT TEMPERATURE



MAXIMUM FORWARD CURRENT vs. AMBIENT TEMPERATURE

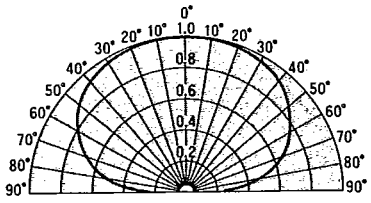




FORWARD VOLTAGE vs. AMBIENT TEMPERATURE

SPATIAL DISTRIBUTION

PY



AY