

STANLEY**STANLEY
SUPER BRIGHT
LED LAMP**T-41-21
ø5(T-1 3/4)TYPE**5603****5613****5623****5633****SERIES****SELECTION GUIDE**

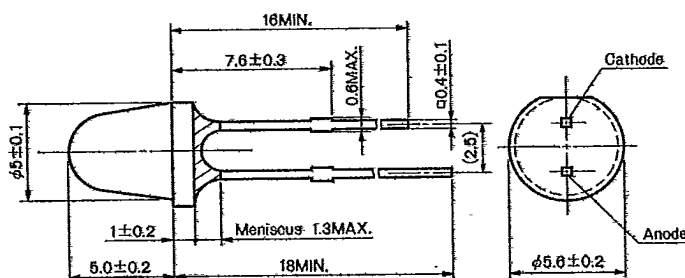
COLOR	MATERIAL	PART NUMBER
Red	GaAlAs	(E)SBR 5603, 5623 5613, 5633
	GaAsP	SAR 5603, 5623 5613, 5633
	GaP	SPR 5603, 5623 5613, 5633
Green	GaP	(E)SBG 5603, 5623 5613, 5633
	GaP	SPG 5623 5633
Yellow	GaP	(E)SPY 5603, 5623 5613, 5633
	GaAsP/GaP	(E)SAY 5603, 5623 5613, 5633
Orange	GaAsP/GaP	(E)SAA 5603, 5623 5613, 5633

FEATURES

- AVAILABLE IN 4 COLORS; RED, GREEN, YELLOW AND ORANGE
- LOW DOME WITH 5mm DIA, 6.0mm HIGHT
- AVAILABLE IN WIDE VIEWING ANGLE
- LOW CURRENT DRIVE, DIRECTLY COMPATIBLE WITH IC
- QUICK RESPONSE, ALLOWING PULSED OPERATION
- HIGH RELIABILITY

DESCRIPTION

Low dome type LED series are available in standard types using chip materials of GaAsP and GaP and super bright types using chip materials of GaAlAs, GaP and GaAsP/GaP. Low dome LEDs are most suitable for the use requiring wide range illumination in limited space.

Package Dimensions—Unit in mm

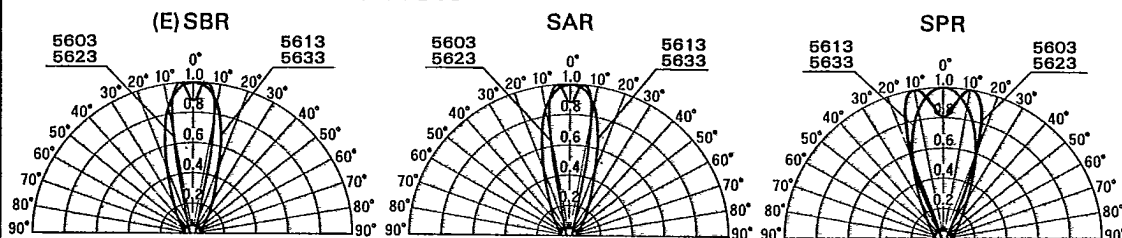
Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Red			Green		Yellow		Orange	Units
		BR	AR	PR	BG	PG	PY	AY	AA	
Forward Current	I _F	50	50	30	50	50	50	50	50	mA
Peak Forward Current	I _{FM}	300	300	100	100	100	100	100	100	mA
Reverse Voltage	V _R	4			4		4		4	V
Power Dissipation	P _d	100	100	75	125	125	125	125	125	mW
Operating Temperature	T _{opr}	-30~+ 85			-30~+ 85		-30~+ 85		-30~+85	°C
Storage Temperature	T _{stg}	-30~+100			-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)

Type No.	Chip		Lens	I _v (mcd)		at I _F (mA)	Peak Wave Length λ _p (nm)	Spectral Line Half Width Δλ(nm)	V _F (V)		at I _F (mA)	at V _A 4V I _R (μA)	Capaci tance Co(pF)
	Material	Emitted Color		Min.	Typ.				Typ.	Max.			
SBR5603(23)	GaAlAs	Red	W.C. (C.C.)	15.0	30.0	20	660	30	1.7	2.0	20	100	50
5633(13)	GaAlAs	Red	C.D. (W.D.)	8.0	20.0	20	660	30	1.7	2.0	20	100	50
ESBR5603(23)	GaAlAs	Red	W.C. (C.C.)	30.0	60.0	20	660	30	1.7	2.0	20	100	50
5633(13)	GaAlAs	Red	C.D. (W.D.)	20.0	30.0	20	660	30	1.7	2.0	20	100	50
SAR5603(23)	GaAsP	Red	W.C. (C.C.)	2.5	5.0	20	650	30	1.7	2.0	20	100	40
5633(13)	GaAsP	Red	C.D. (W.D.)	1.5	3.0	20	650	30	1.7	2.0	20	100	40
SPR5603(23)	GaP	Red	W.C. (C.C.)	4.0	8.0	10	700	100	2.1	2.5	10	100	70
5633(13)	GaP	Red	C.D. (W.D.)	2.5	5.0	10	700	100	2.1	2.5	10	100	70
SBG5603(23)	GaP	Green	W.C. (C.C.)	8.0	16.0	20	555	30	2.1	2.5	20	100	50
5633(13)	GaP	Green	C.D. (W.D.)	4.0	8.0	20	555	30	2.1	2.5	20	100	50
ESBG5603(23)	GaP	Green	W.C. (C.C.)	16.0	24.0	20	555	30	2.1	2.5	20	100	50
5633(13)	GaP	Green	C.D. (W.D.)	8.0	12.0	20	555	30	2.1	2.5	20	100	50
SPG5623	GaP	Green	C.C.	18.0	36.0	20	565	30	2.1	2.5	20	100	40
5633	GaP	Green	C.D.	12.0	24.0	20	565	30	2.1	2.5	20	100	40
SPY5603(23)	GaP	Yellow	W.C. (C.C.)	25.0	50.0	20	570	30	2.1	2.5	20	100	40
5633(13)	GaP	Yellow	C.D. (W.D.)	15.0	30.0	20	570	30	2.1	2.5	20	100	40
ESPY5603(23)	GaP	Yellow	W.C. (C.C.)	50.0	75.0	20	570	30	2.1	2.5	20	100	40
5633(13)	GaP	Yellow	C.D. (W.D.)	30.0	45.0	20	570	30	2.1	2.5	20	100	40
SAY5603(23)	GaAsP/GaP	Yellow	W.C. (C.C.)	15.0	30.0	20	580	30	2.2	2.5	20	100	40
5633(13)	GaAsP/GaP	Yellow	C.D. (W.D.)	8.0	20.0	20	580	30	2.2	2.5	20	100	40
ESAY5603(23)	GaAsP/GaP	Yellow	W.C. (C.C.)	30.0	45.0	20	580	30	2.2	2.5	20	100	40
5633(13)	GaAsP/GaP	Yellow	C.D. (W.D.)	20.0	30.0	20	580	30	2.2	2.5	20	100	40
SAA5603(23)	GaAsP/GaP	Orange	W.C. (C.C.)	15.0	30.0	20	605	30	2.2	2.5	20	100	50
5633(13)	GaAsP/GaP	Orange	C.D. (W.D.)	8.0	20.0	20	605	30	2.2	2.5	20	100	50
ESAA5603(23)	GaAsP/GaP	Orange	W.C. (C.C.)	30.0	45.0	20	605	30	2.2	2.5	20	100	50
5633(13)	GaAsP/GaP	Orange	C.D. (W.D.)	20.0	30.0	20	605	30	2.2	2.5	20	100	50

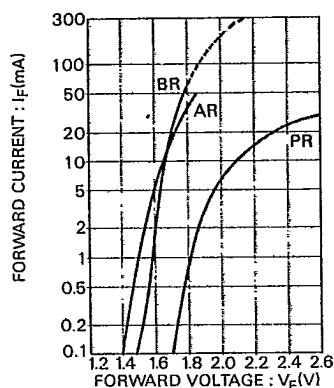
SPATIAL DISTRIBUTION



RED

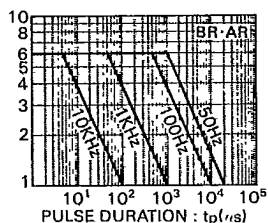
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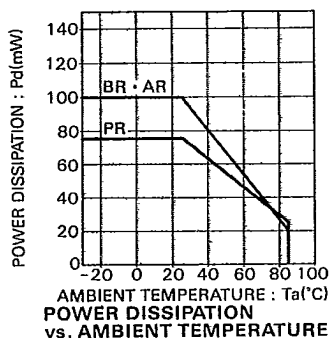


FORWARD CURRENT vs. FORWARD VOLTAGE

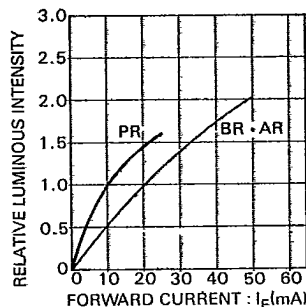
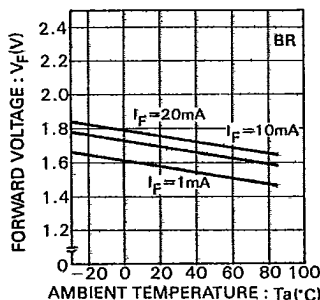
RATIO OF MAXIMUM TOLERABLE
PEAK CURRENT
TO MAXIMUM TOLERABLE
DC CURRENT



MAXIMUM TOLERABLE PEAK CURRENT vs. PULSE DURATION

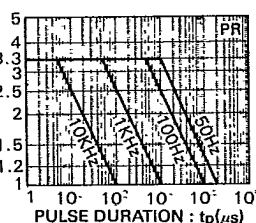


POWER DISSIPATION vs. AMBIENT TEMPERATURE

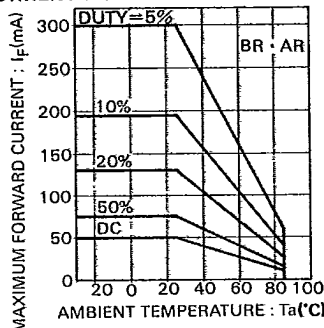


RELATIVE LUMINOUS INTENSITY vs. FORWARD CURRENT

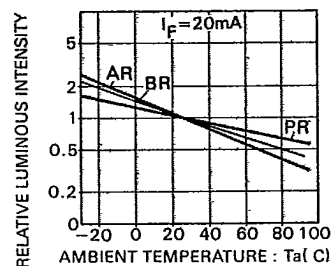
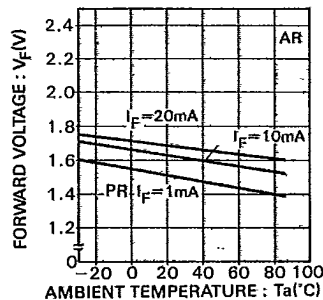
RATIO OF MAXIMUM TOLERABLE
PEAK CURRENT
TO MAXIMUM TOLERABLE
DC CURRENT



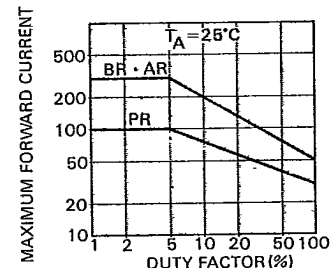
MAXIMUM TOLERABLE PEAK CURRENT vs. PULSE DURATION



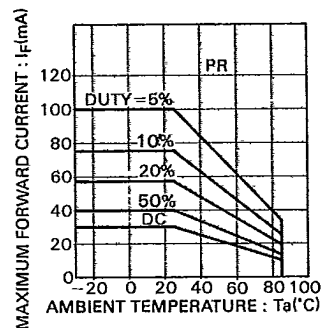
MAXIMUM FORWARD CURRENT vs. AMBIENT TEMPERATURE



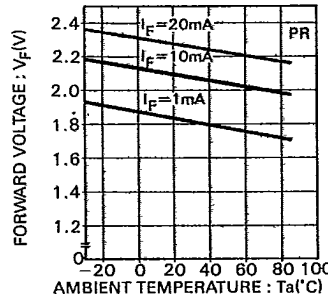
RELATIVE LUMINOUS INTENSITY vs. AMBIENT TEMPERATURE



MAXIMUM FORWARD CURRENT vs. DUTY FACTOR



MAXIMUM FORWARD CURRENT vs. AMBIENT TEMPERATURE



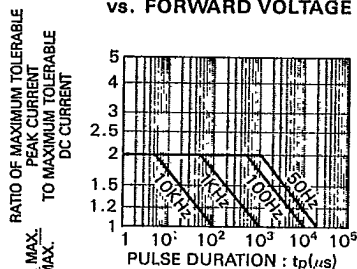
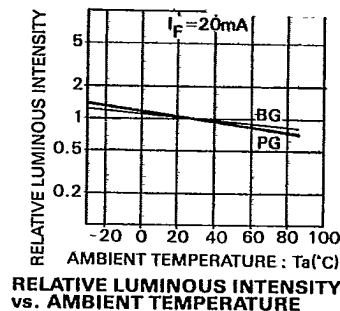
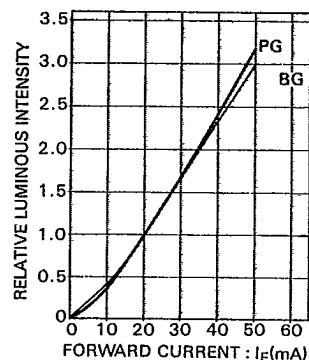
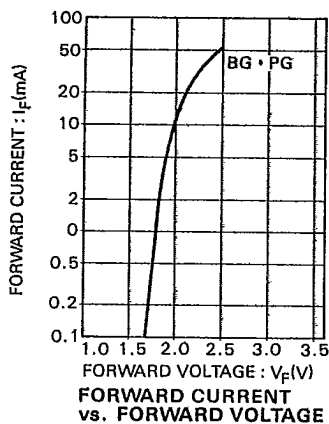
FORWARD VOLTAGE vs. AMBIENT TEMPERATURE

GREEN

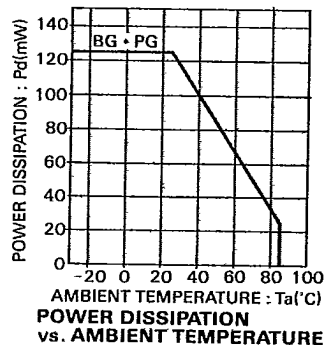
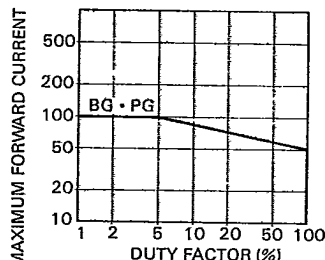
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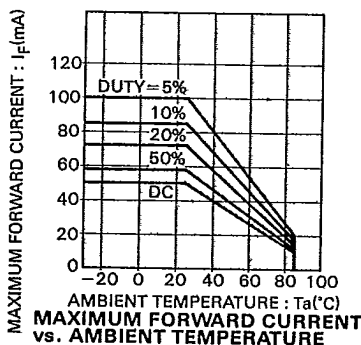
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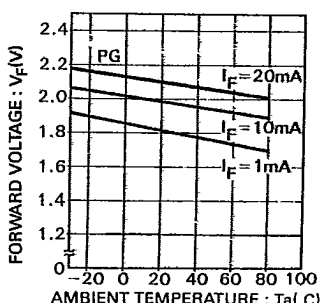
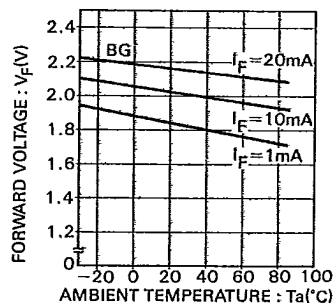
RELATIVE LUMINOUS INTENSITY vs. FORWARD CURRENT



MAXIMUM TOLERABLE PEAK CURRENT vs. PULSE DURATION



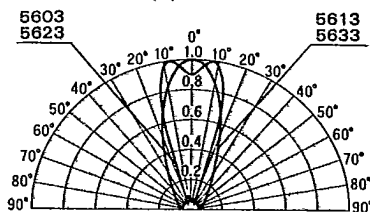
MAXIMUM FORWARD CURRENT vs. DUTY FACTOR



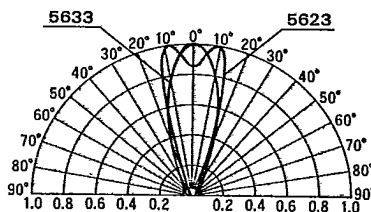
FORWARD VOLTAGE vs. AMBIENT TEMPERATURE

SPATIAL DISTRIBUTION

(E) SBG



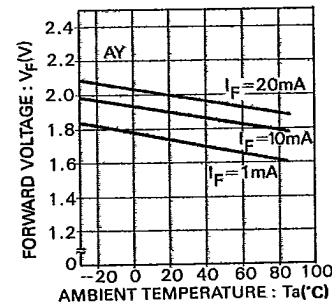
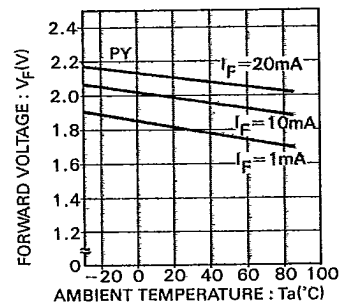
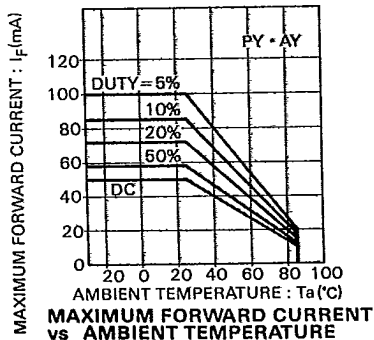
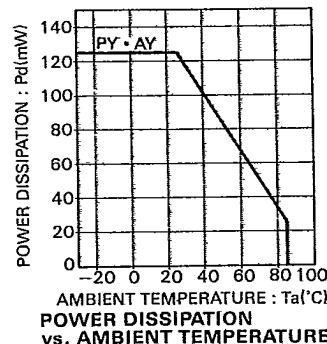
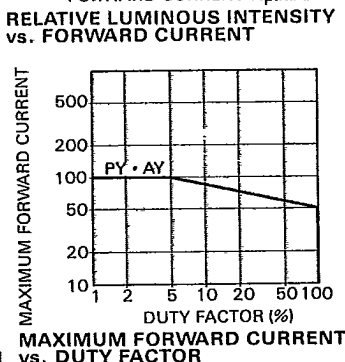
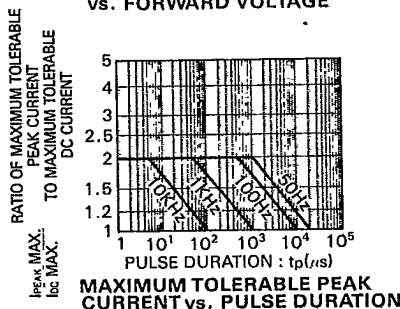
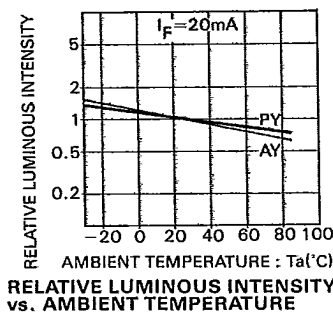
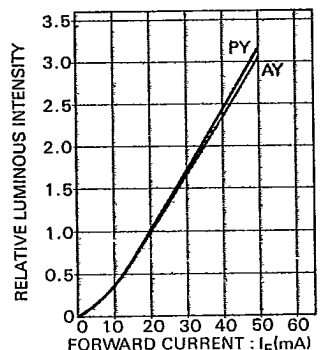
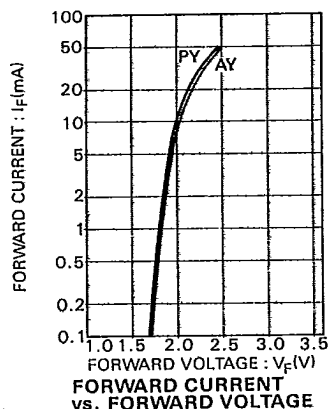
SPG



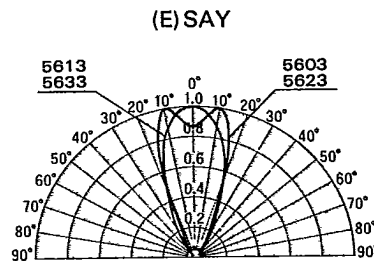
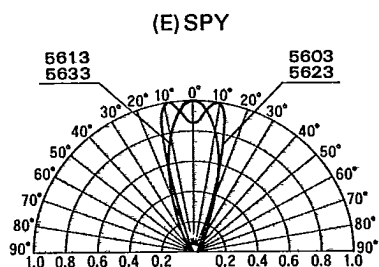
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YELLOW



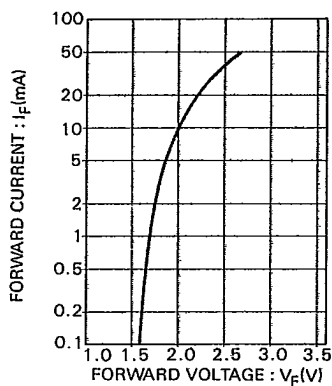
SPATIAL DISTRIBUTION



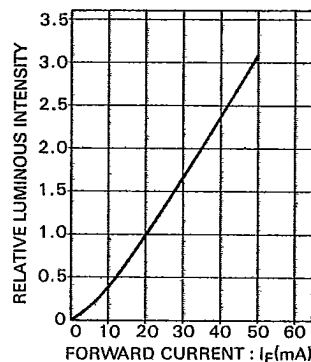
ORANGE

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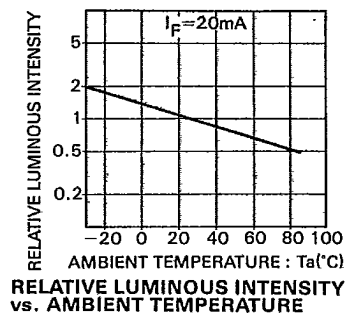
25E D



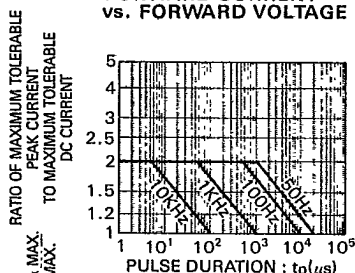
FORWARD CURRENT vs. FORWARD VOLTAGE



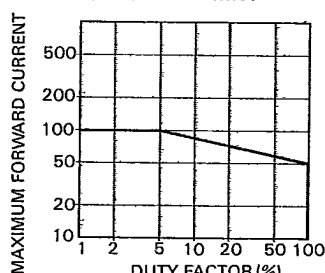
RELATIVE LUMINOUS INTENSITY vs. FORWARD CURRENT



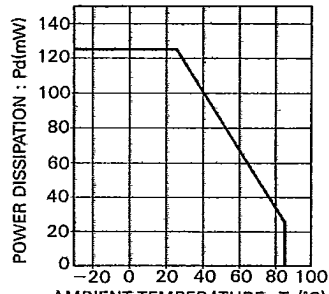
RELATIVE LUMINOUS INTENSITY vs. AMBIENT TEMPERATURE



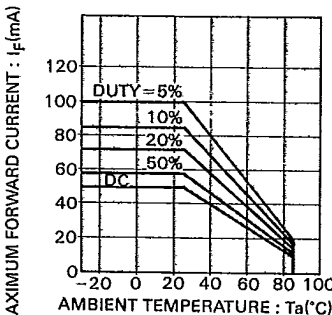
MAXIMUM TOLERABLE PEAK CURRENT vs. PULSE DURATION



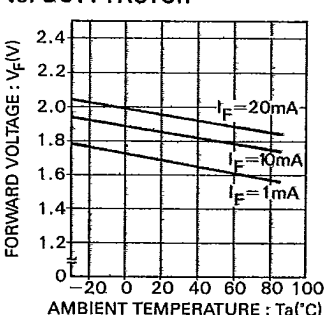
MAXIMUM FORWARD CURRENT vs. DUTY FACTOR



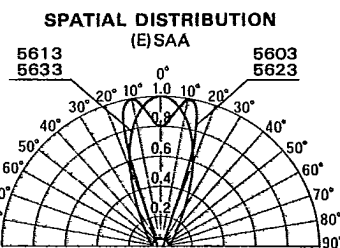
POWER DISSIPATION vs. AMBIENT TEMPERATURE



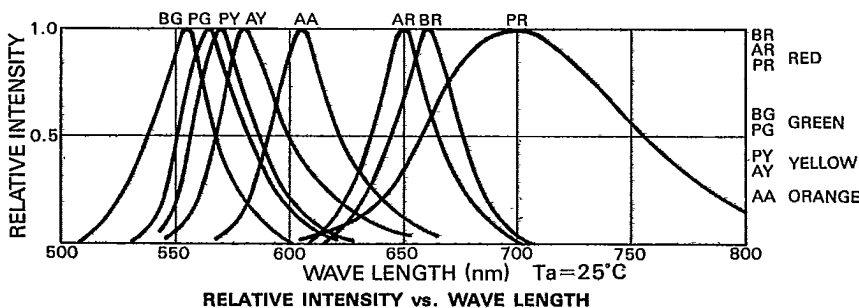
MAXIMUM FORWARD CURRENT vs. AMBIENT TEMPERATURE



FORWARD VOLTAGE vs. AMBIENT TEMPERATURE



SPATIAL DISTRIBUTION (E) SAA



RELATIVE INTENSITY vs. WAVE LENGTH

