



**STANLEY
SUPER BRIGHT
LED LAMP**

T-41-21

φ3(T-1)TYPE

3401 3411 3421 3431 3901 3911 3921 3931 SERIES



SELECTION GUIDE

COLOR	MATERIAL	PART NUMBER	
Red	GaAlAs	(E)SBR 3401, 3901 3411, 3911 3421, 3921 3431, 3931	
		GaAsP	SAR 3401, 3901 3411, 3911 3421, 3921 3431, 3931
			GaP
	GaP		
		SPG 3431, 3921 3431, 3931	
	Yellow	GaP	(E)SPY 3401, 3901 3411, 3911 3421, 3921 3431, 3931
GaAsP/GaP		(E)SAY 3401, 3901 3411, 3911 3421, 3921 3431, 3931	
Orange	GaAsP/GaP	(E)SAA 3401, 3901 3411, 3911 3421, 3921 3431, 3931	

FEATURES

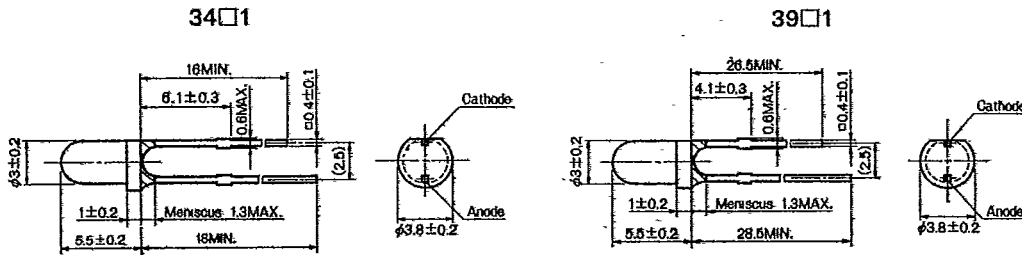
- AVAILABLE IN 4 COLORS; RED, GREEN, YELLOW AND ORANGE
- 3mm DIA EPOXY PACKAGE
- AVAILABLE IN BOTH WIDE AND NARROW VIEWING ANGLES
- LOW CURRENT DRIVE, DIRECTLY COMPATIBLE WITH IC
- QUICK RESPONSE, ALLOWING PULSED OPERATION
- HIGH RELIABILITY

DESCRIPTION

These series are encapsulated in a 3mm DIA epoxy packages and are available in two types according to the resin of the package; one

with wide viewing angle with diffusive agent, the other with narrow viewing angle with high luminous intensity in axis direction.

Package Dimensions—Unit in mm



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■ Absolute Maximum Ratings (Ia=25°C)

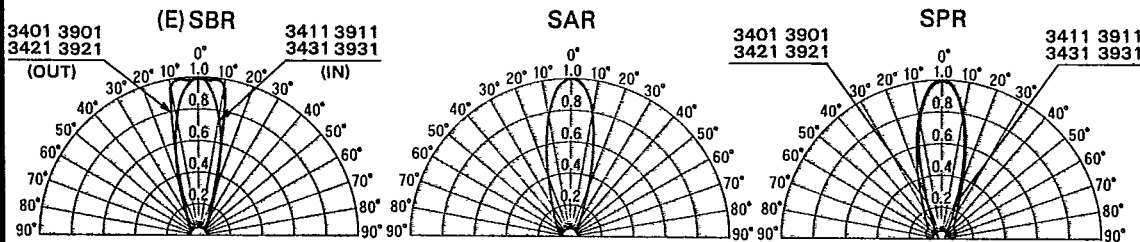
Parameter	Symbol	Red			Green		Yellow		Orange	Units
		BR	AR	PR	BG	PG	PY	AY	AA	
Forward Current	I _F	50	50	30	50	50	50	50	50	mA
Peak Forward Current	I _{FM}	300	300	100	100	100	100	100	100	mA
Reverse Voltage	V _R	4			4		4		4	V
Power Dissipation	P _d	100	100	75	125	125	125	125	125	mW
Operating Temperature	Topr	-30~+85			-30~+85		-30~+85		-30~+85	°C
Storage Temperature	Tstg	-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	Iv(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 _{R4V} I _r (μA)	Capacitance Co(pF)
	Material	Emitted Color		Min.	Typ.				Typ.	Max.			
SBR3401(21)	GaAlAs	Red	W.C (C.C)	15.0	30.0	20	660	30	1.7	2.0	20	100	50
3431(11)	GaAlAs	Red	C.D (W.D)	12.0	24.0	20	660	30	1.7	2.0	20	100	50
ESBR3401(21)	GaAlAs	Red	W.C (C.C)	30.0	60.0	20	660	30	1.7	2.0	20	100	50
3431(11)	GaAlAs	Red	C.D (W.D)	24.0	48.0	20	660	30	1.7	2.0	20	100	50
SAR3401(21)	GaAsP	Red	W.C (C.C)	2.5	5.0	20	650	30	1.7	2.0	20	100	40
3431(11)	GaAsP	Red	C.D (W.D)	1.0	2.0	20	650	30	1.7	2.0	20	100	40
SPR3401(21)	GaP	Red	W.C (C.C)	2.5	5.0	10	700	100	2.1	2.5	10	100	70
3431(11)	GaP	Red	C.D (W.D)	1.0	2.0	10	700	100	2.1	2.5	10	100	70
SBG3401(21)	GaP	Green	W.C (C.C)	5.0	10.0	20	555	30	2.1	2.5	20	100	50
3431(11)	GaP	Green	C.D (W.D)	2.0	4.0	20	555	30	2.1	2.5	20	100	50
ESBG3401(21)	GaP	Green	W.C (C.C)	10.0	15.0	20	555	30	2.1	2.5	20	100	50
3431(11)	GaP	Green	C.D (W.D)	4.0	8.0	20	555	30	2.1	2.5	20	100	50
SPG3421	GaP	Green	C.C	10.0	20.0	20	565	30	2.1	2.5	20	100	40
3431	GaP	Green	C.D	7.0	14.0	20	565	30	2.1	2.5	20	100	40
SPY3401(21)	GaP	Yellow	W.C (C.C)	12.0	24.0	20	570	30	2.1	2.5	20	100	40
3431(11)	GaP	Yellow	C.D (W.D)	10.0	20.0	20	570	30	2.1	2.5	20	100	40
ESPY3401(21)	GaP	Yellow	W.C (C.C)	24.0	48.0	20	570	30	2.1	2.5	20	100	40
3431(11)	GaP	Yellow	C.D (W.D)	20.0	30.0	20	570	30	2.1	2.5	20	100	40
SAY3401(21)	GaAsP/GaP	Yellow	W.C (C.C)	8.0	16.0	20	580	30	2.2	2.5	20	100	40
3431(11)	GaAsP/GaP	Yellow	C.D (W.D)	6.0	12.0	20	580	30	2.2	2.5	20	100	40
ESAY3401(21)	GaAsP/GaP	Yellow	W.C (C.C)	16.0	24.0	20	580	30	2.2	2.5	20	100	40
3431(11)	GaAsP/GaP	Yellow	C.D (W.D)	12.0	18.0	20	580	30	2.2	2.5	20	100	40
SAA3401(21)	GaAsP/GaP	Orange	W.C (C.C)	8.0	16.0	20	605	30	2.2	2.5	20	100	50
3431(11)	GaAsP/GaP	Orange	C.D (W.D)	6.0	12.0	20	605	30	2.2	2.5	20	100	50
ESAA3401(21)	GaAsP/GaP	Orange	W.C (C.C)	16.0	24.0	20	605	30	2.2	2.5	20	100	50
3431(11)	GaAsP/GaP	Orange	C.D (W.D)	12.0	18.0	20	605	30	2.2	2.5	20	100	50

39□1 types have the same characteristics with those of 34□1 types

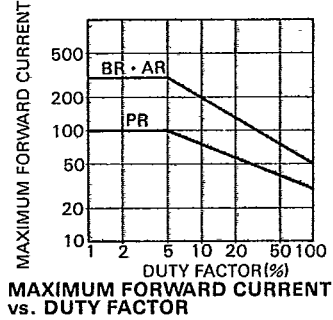
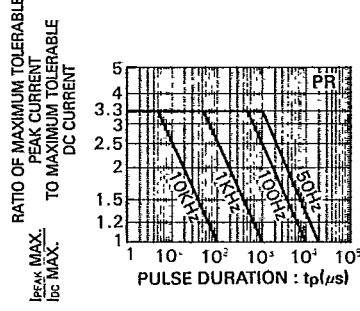
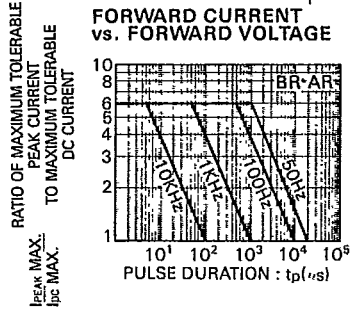
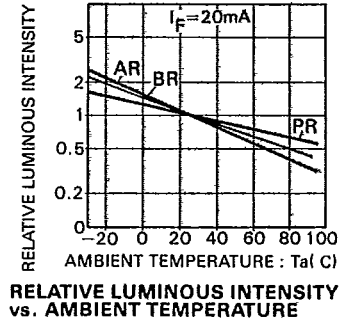
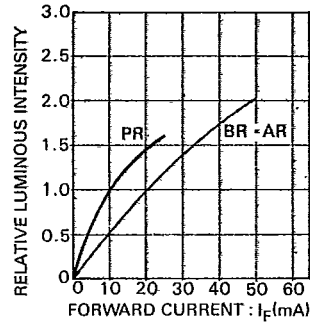
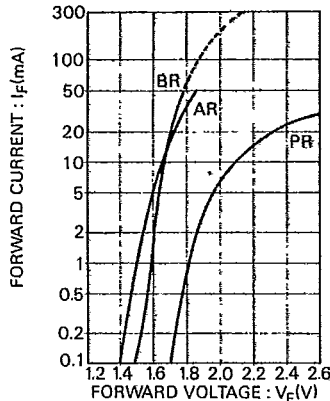
■ SPATIAL DISTRIBUTION



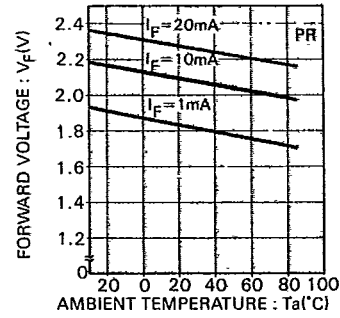
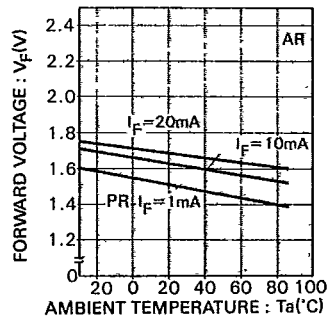
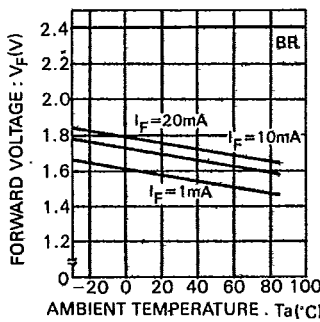
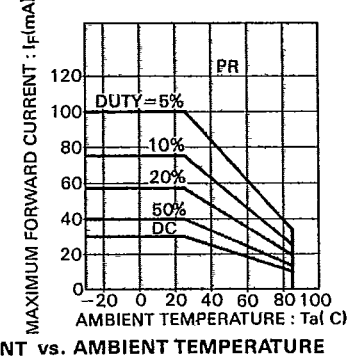
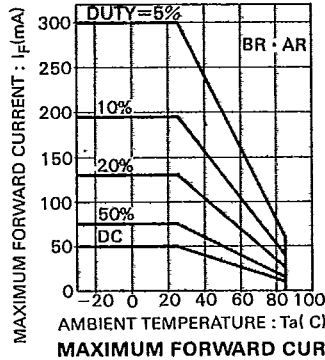
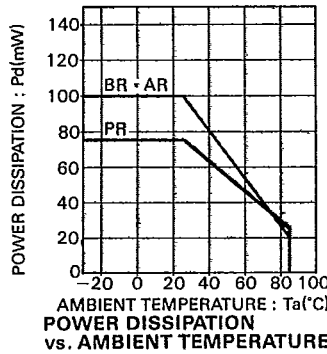
RED

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MAXIMUM TOLERABLE PEAK CURRENT vs. PULSE DURATION



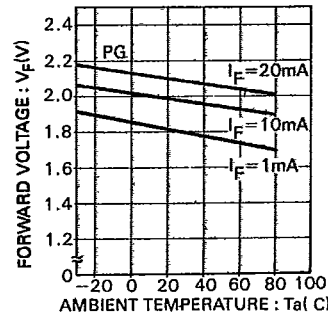
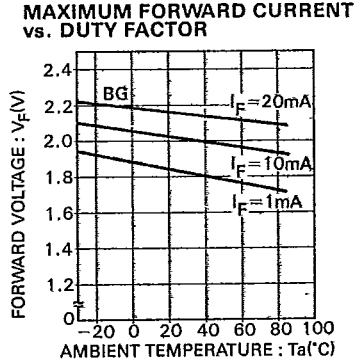
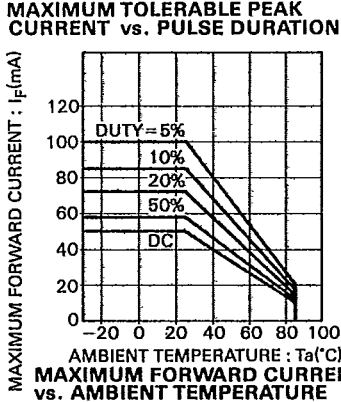
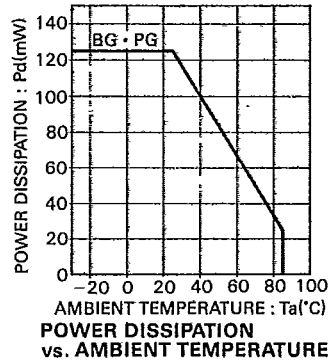
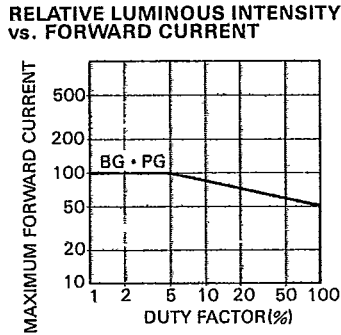
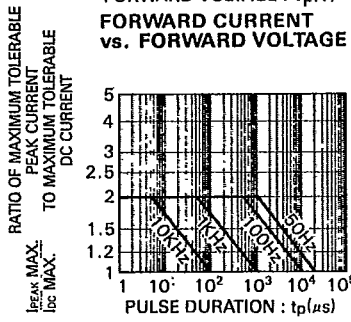
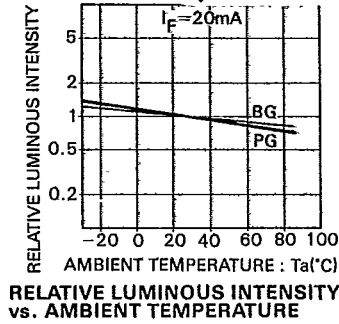
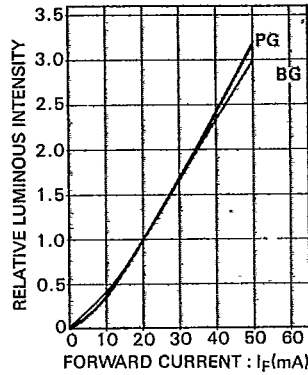
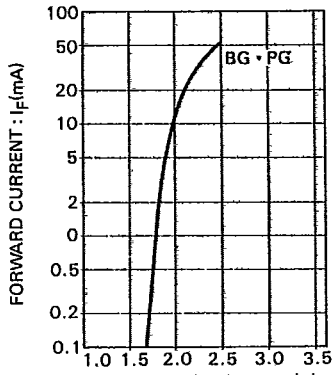
FORWARD VOLTAGE vs. AMBIENT TEMPERATURE

GREEN

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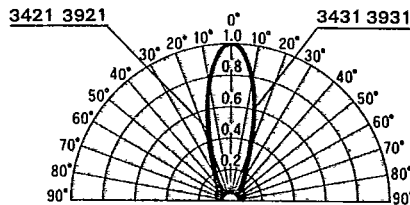
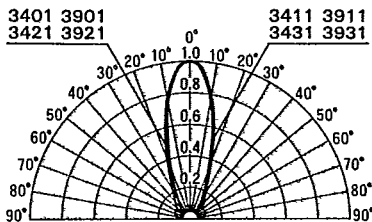
T-41-21



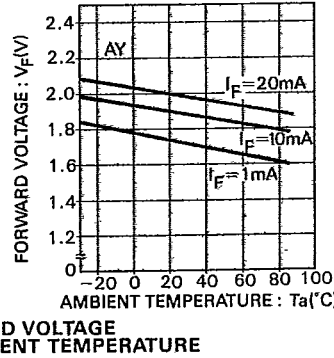
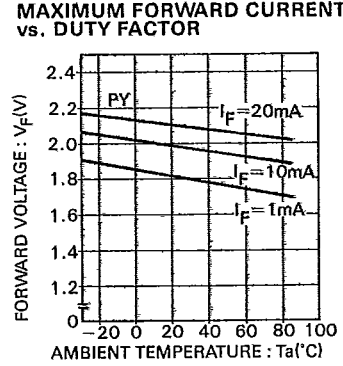
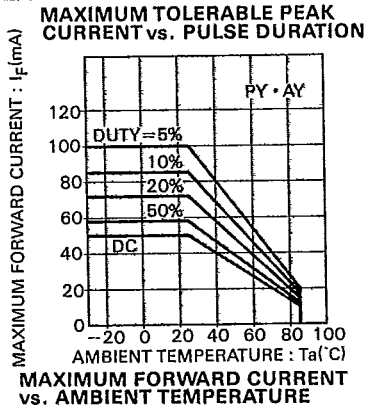
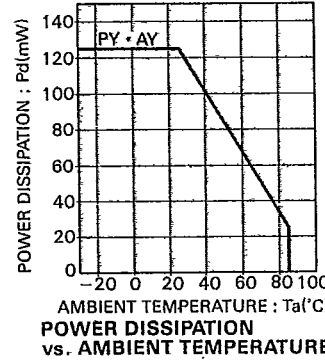
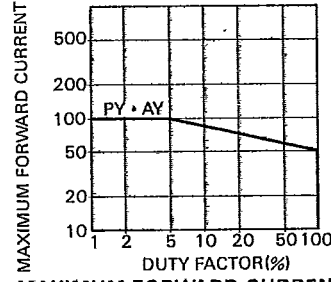
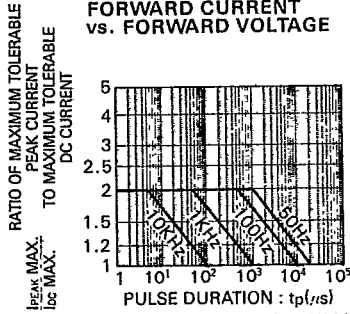
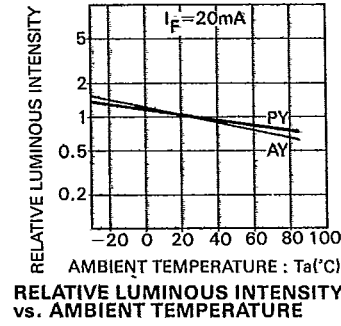
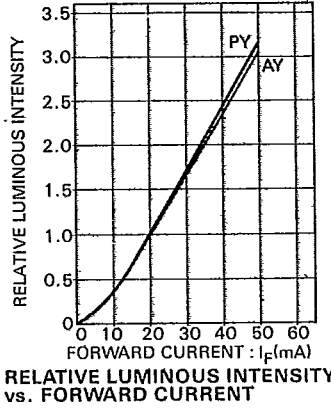
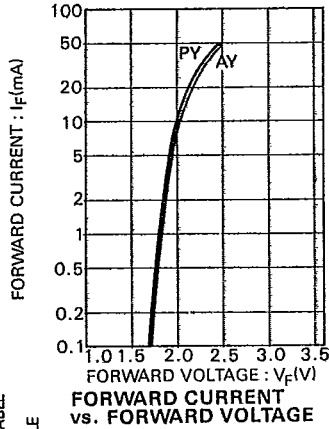
SPATIAL DISTRIBUTION

(E) SBG

SPG

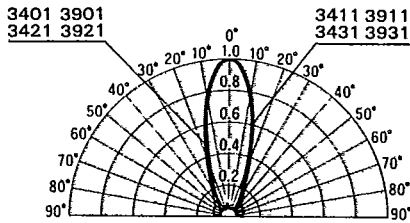


YELLOW

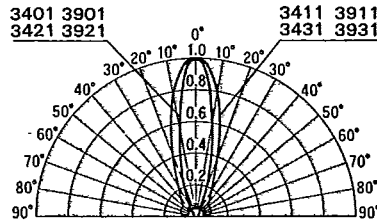


SPATIAL DISTRIBUTION

(E) SPY



(E) SAY

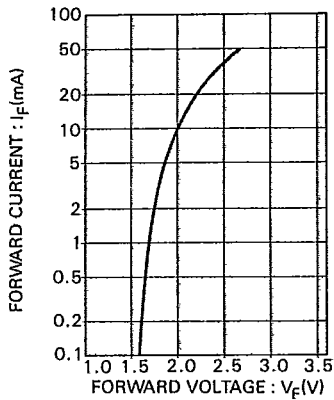


ORANGE

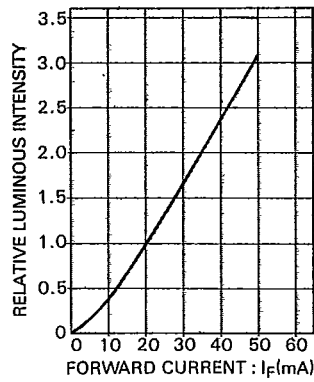
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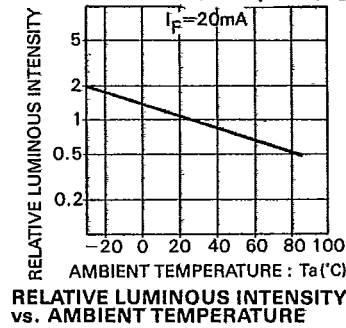
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FORWARD CURRENT vs. FORWARD VOLTAGE

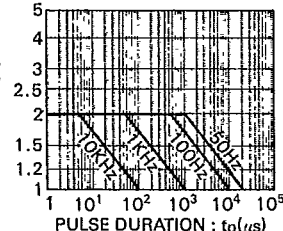


RELATIVE LUMINOUS INTENSITY vs. FORWARD CURRENT

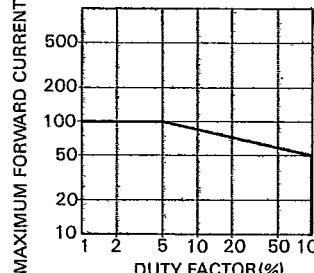


RELATIVE LUMINOUS INTENSITY vs. AMBIENT TEMPERATURE

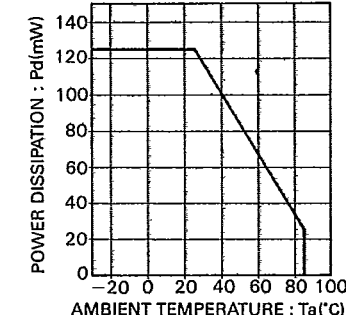
RATIO OF MAXIMUM TOLERABLE PEAK CURRENT TO MAXIMUM TOLERABLE DC CURRENT



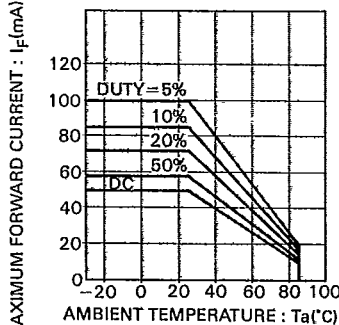
MAXIMUM TOLERABLE PEAK CURRENT vs. PULSE DURATION



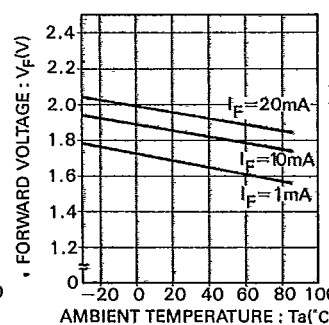
MAXIMUM FORWARD CURRENT vs. DUTY FACTOR



POWER DISSIPATION vs. AMBIENT TEMPERATURE

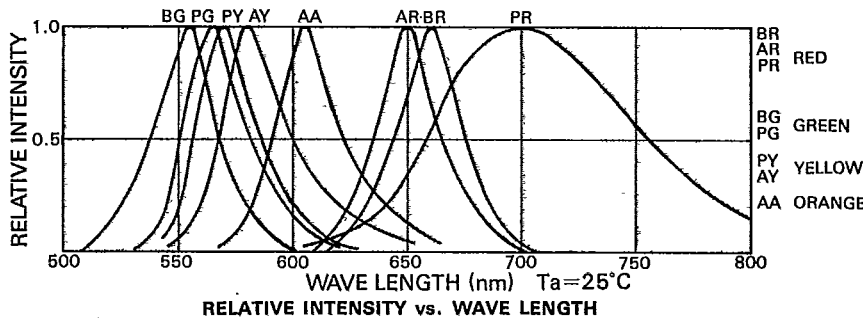
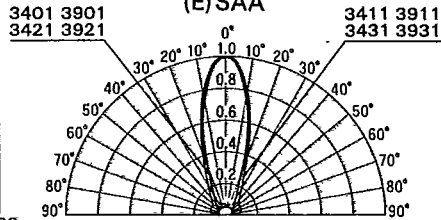


MAXIMUM FORWARD CURRENT vs. AMBIENT TEMPERATURE



FORWARD VOLTAGE vs. AMBIENT TEMPERATURE

SPATIAL DISTRIBUTION (E) SAA



RELATIVE INTENSITY vs. WAVE LENGTH

