

STANLEY**STANLEY
SUPER BRIGHT
LED LAMP**

T-41-21

 $\phi 3(T-1)$ TYPE

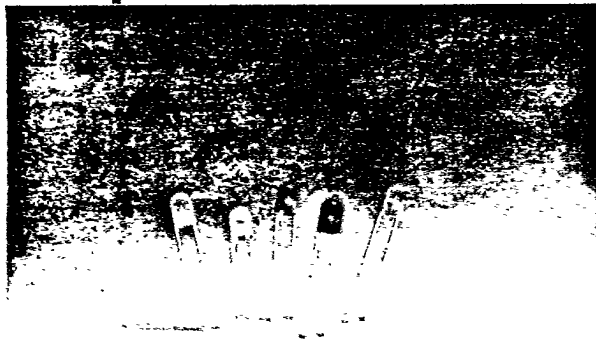
3403

3413

3423

3433

SERIES

**SELECTION GUIDE**

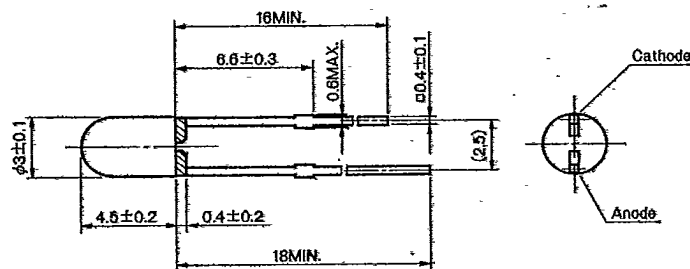
COLOR	MATERIAL	PART NUMBER
Red	GaAlAs	(E)SBR 3403, 3423 3413, 3433
	GaAsP	SAR 3403, 3423 3413, 3433
	GaP	SPR 3403, 3423 3413, 3433
Green	GaP	(E)SBG 3403, 3423 3413, 3433
	GaP	SPG 3423, 3433
Yellow	GaP	(E)SPY 3403, 3423 3413, 3433
	GaAsP/GaP	(E)SAY 3403, 3423 3413, 3433
Orange	GaAsP/GaP	(E)SAA 3403, 3423 3413, 3433

FEATURES

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

DESCRIPTION

These series are encapsulated in 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

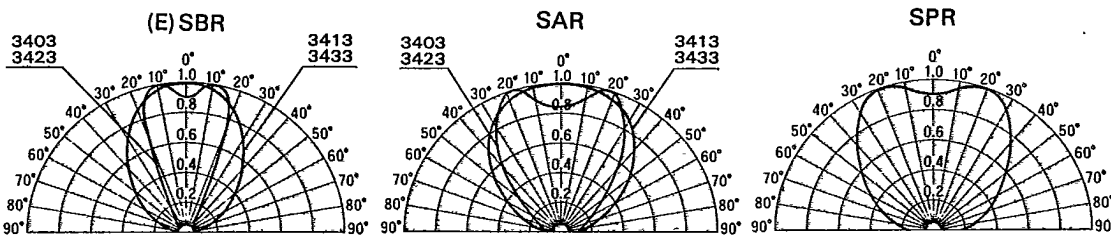
Absolute Maximum Ratings (Ta=25°C)

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	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		240°C for 3 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 _R 4V I _R (μA)	Capacitance C _o (pF)
	Material	Emitted Color		Min.	Typ.				Typ.	Max.			
SBR3403(23)	GaAlAs	Red	W.C (C.C)	6.0	12.0	20	660	30	1.7	2.0	20	100	50
3433(13)	GaAlAs	Red	C.D (W.D)	5.0	10.0	20	660	30	1.7	2.0	20	100	50
ESBR3403(23)	GaAlAs	Red	W.C (C.C)	12.0	18.0	20	660	30	1.7	2.0	20	100	50
3433(13)	GaAlAs	Red	C.D (W.D)	10.0	15.0	20	660	30	1.7	2.0	20	100	50
SAR3403(23)	GaAsP	Red	W.C (C.C)	0.6	1.2	20	650	30	1.7	2.0	20	100	40
3433(13)	GaAsP	Red	C.D (W.D)	0.5	0.8	20	650	30	1.7	2.0	20	100	40
SPR3403(23)	GaP	Red	W.C (C.C)	0.6	1.2	10	700	100	2.1	2.5	10	100	70
3433(13)	GaP	Red	C.D (W.D)	0.5	0.8	10	700	100	2.1	2.5	10	100	70
SBG3403(23)	GaP	Green	W.C (C.C)	1.2	2.4	20	555	30	2.1	2.5	20	100	50
3433(13)	GaP	Green	C.D (W.D)	0.8	1.6	20	555	30	2.1	2.5	20	100	50
ESBG3403(23)	GaP	Green	W.C (C.C)	2.4	3.6	20	555	30	2.1	2.5	20	100	50
3433(13)	GaP	Green	C.D (W.D)	1.6	2.4	20	555	30	2.1	2.5	20	100	50
SPG3423	GaP	Green	C.C	4.0	8.0	20	565	30	2.1	2.5	20	100	40
3433	GaP	Green	C.D	3.0	6.0	20	565	30	2.1	2.5	20	100	40
SPY3403(23)	GaP	Yellow	W.C (C.C)	5.0	10.0	20	570	30	2.1	2.5	20	100	40
3433(13)	GaP	Yellow	C.D (W.D)	4.0	8.0	20	570	30	2.1	2.5	20	100	40
ESPY3403(23)	GaP	Yellow	W.C (C.C)	10.0	15.0	20	570	30	2.1	2.5	20	100	40
3433(13)	GaP	Yellow	C.D (W.D)	8.0	12.0	20	570	30	2.1	2.5	20	100	40
SAY3403(23)	GaAsP/GaP	Yellow	W.C (C.C)	3.0	6.0	20	580	30	2.2	2.5	20	100	40
3433(13)	GaAsP/GaP	Yellow	C.D (W.D)	2.5	5.0	20	580	30	2.2	2.5	20	100	40
ESAY3403(23)	GaAsP/GaP	Yellow	W.C (C.C)	6.0	9.0	20	580	30	2.2	2.5	20	100	40
3433(13)	GaAsP/GaP	Yellow	C.D (W.D)	5.0	8.0	20	580	30	2.2	2.5	20	100	40
SAA3403(23)	GaAsP/GaP	Orange	W.C (C.C)	3.0	6.0	20	605	30	2.2	2.5	20	100	50
3433(13)	GaAsP/GaP	Orange	C.D (W.D)	2.5	5.0	20	605	30	2.2	2.5	20	100	50
ESAA3403(23)	GaAsP/GaP	Orange	W.C (C.C)	6.0	9.0	20	605	30	2.2	2.5	20	100	50
3433(13)	GaAsP/GaP	Orange	C.D (W.D)	5.0	8.0	20	605	30	2.2	2.5	20	100	50

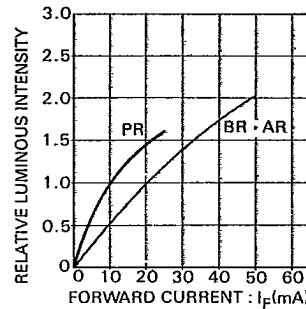
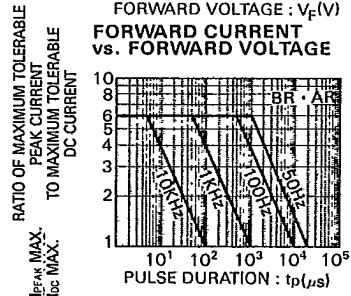
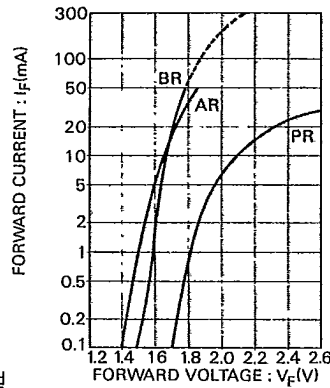
SPATIAL DISTRIBUTION



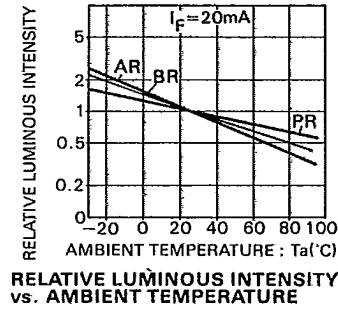
RED

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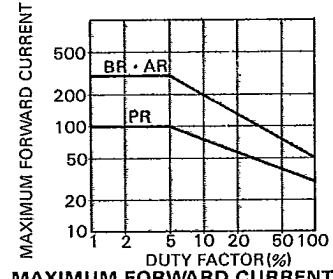
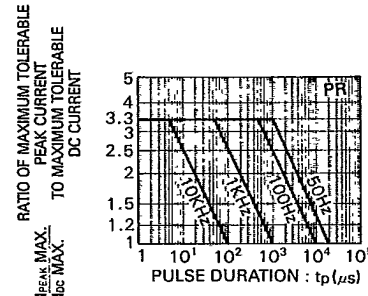
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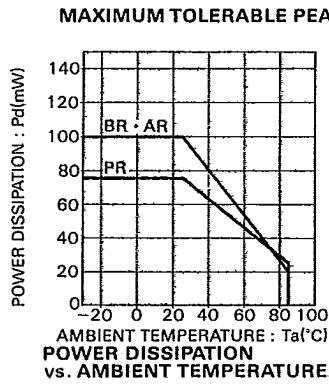
RELATIVE LUMINOUS INTENSITY vs. FORWARD CURRENT



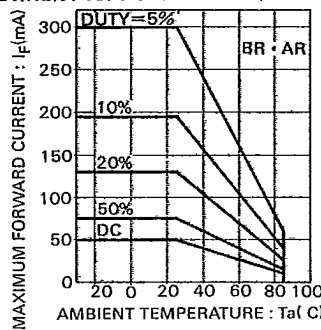
RELATIVE LUMINOUS INTENSITY vs. AMBIENT TEMPERATURE



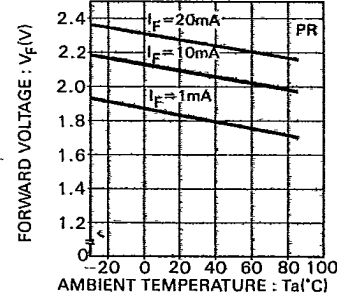
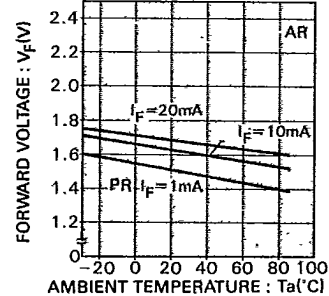
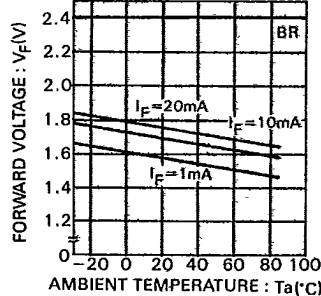
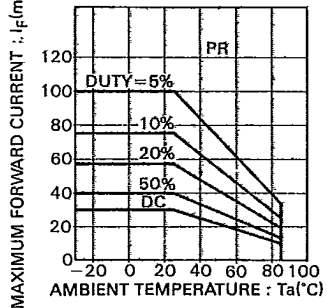
MAXIMUM FORWARD CURRENT vs. DUTY FACTOR



POWER DISSIPATION vs. AMBIENT TEMPERATURE



MAXIMUM FORWARD CURRENT vs. AMBIENT TEMPERATURE

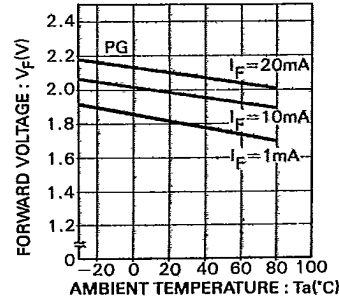
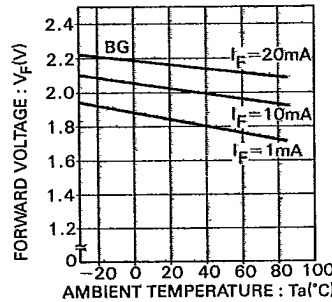
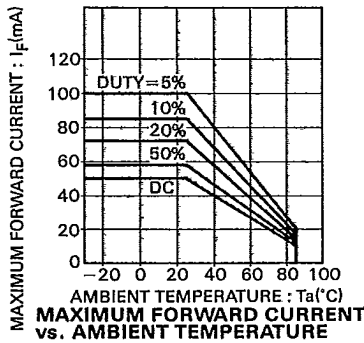
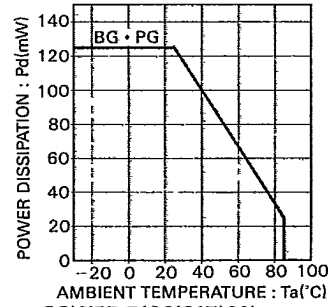
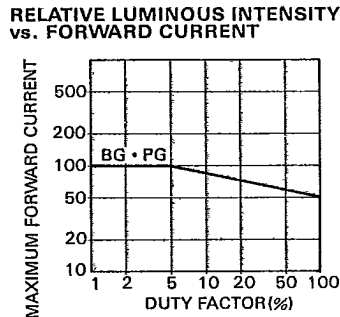
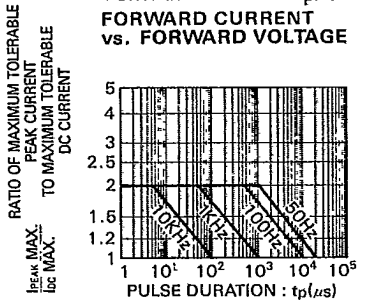
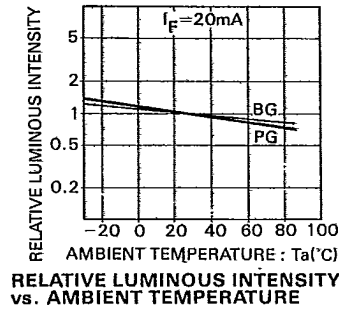
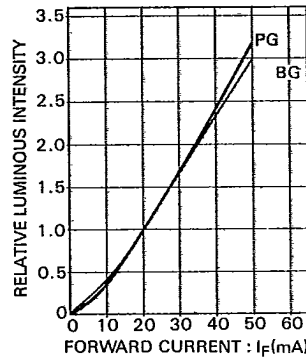
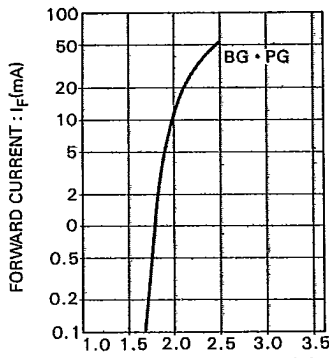


FORWARD VOLTAGE vs. AMBIENT TEMPERATURE

GREEN

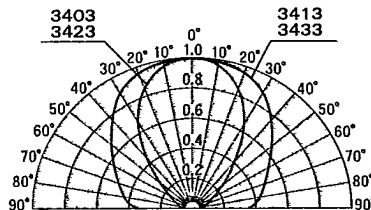
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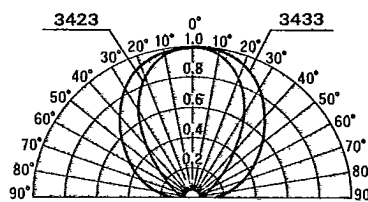


SPATIAL DISTRIBUTION

(E) SBG



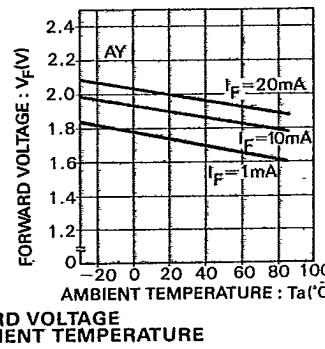
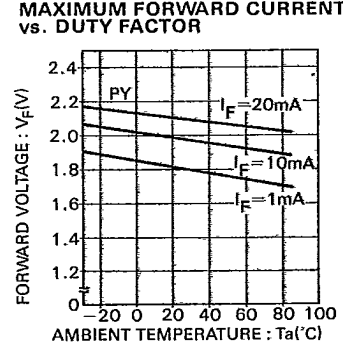
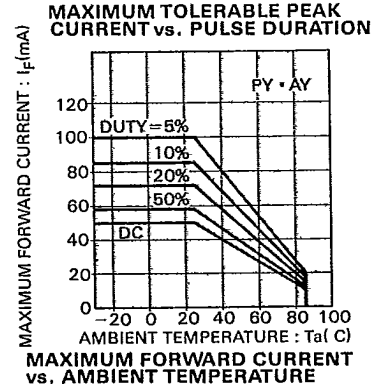
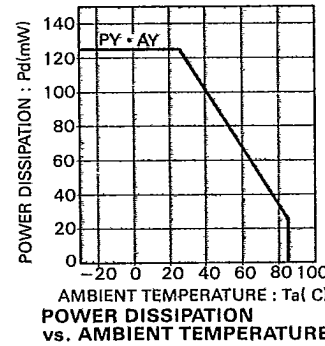
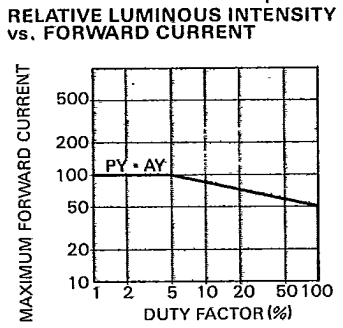
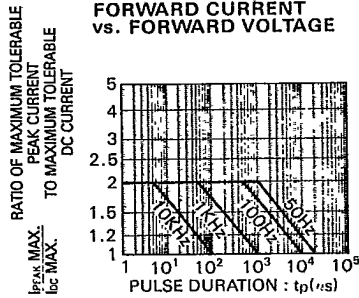
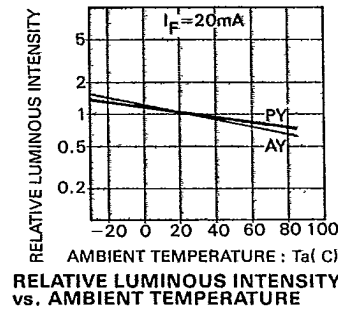
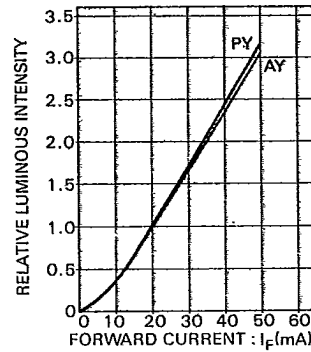
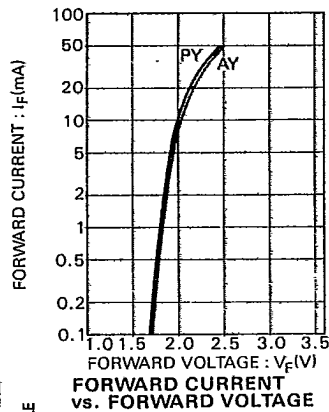
SPG



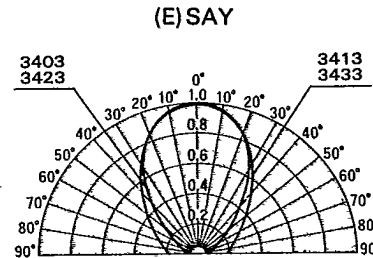
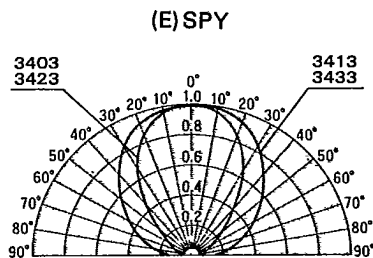
YELLOW

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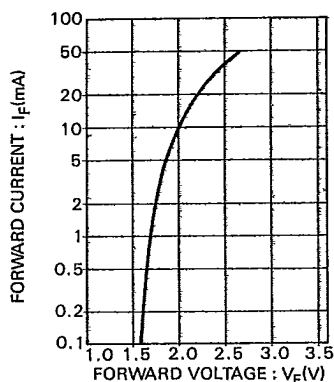
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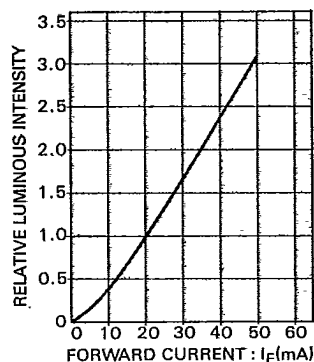
ORANGE

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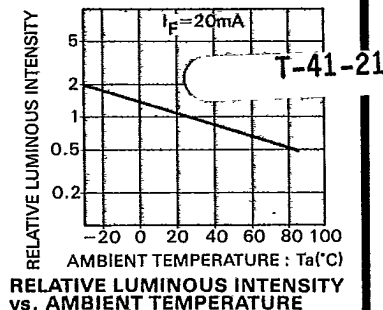
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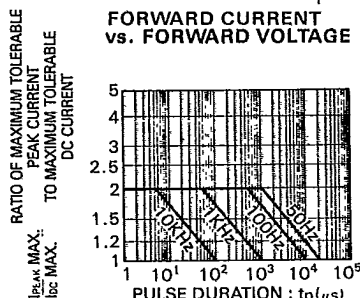
FORWARD CURRENT vs. FORWARD VOLTAGE



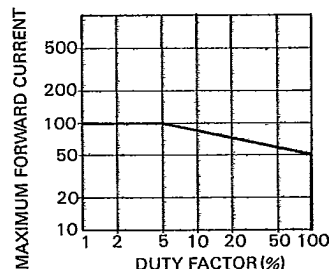
RELATIVE LUMINOUS INTENSITY vs. FORWARD CURRENT



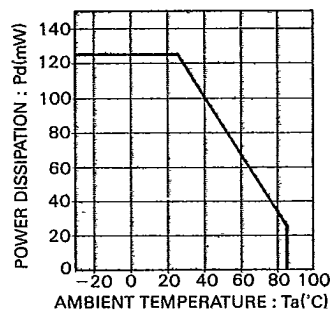
RELATIVE LUMINOUS INTENSITY vs. AMBIENT TEMPERATURE



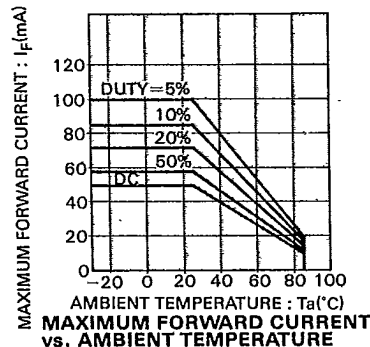
MAXIMUM TOLERABLE PEAK CURRENT vs. PULSE DURATION



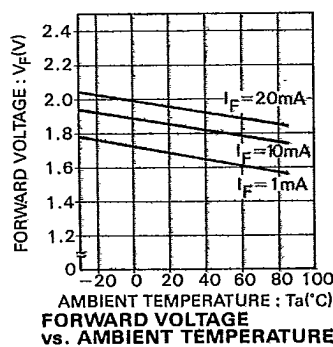
MAXIMUM FORWARD CURRENT vs. DUTY FACTOR



POWER DISSIPATION vs. AMBIENT TEMPERATURE



MAXIMUM FORWARD CURRENT vs. AMBIENT TEMPERATURE



FORWARD VOLTAGE vs. AMBIENT TEMPERATURE

