



STANLEY ELECTRIC CO LTD

# SUPER BRIGHT LED LAMP

ROUND SHAPE TYPE  
φ3 (T-1)

## 3402S/3412S/3422S/3432S/3902S/3912S/3922S/3932S SERIES

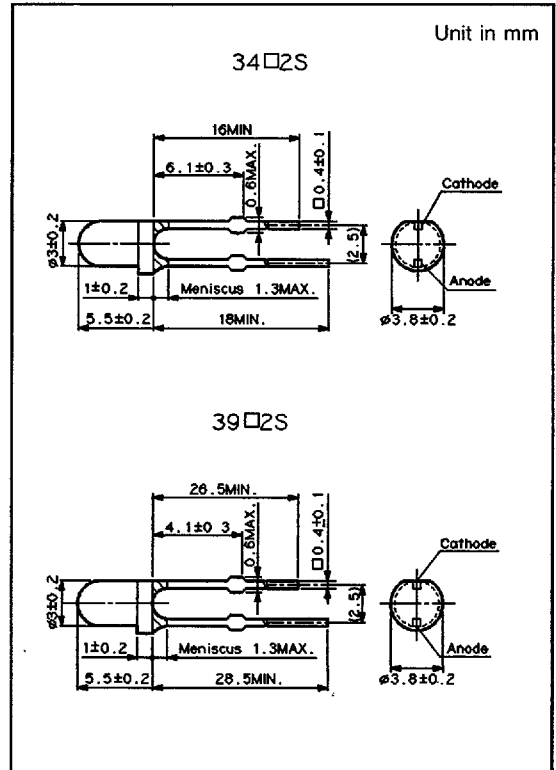
### FEATURES

- AVAILABLE IN 4 COLORS; RED, GREEN, YELLOW AND ORANGE
- ALL RESIN MOLDED PACKAGE
- AVAILABLE IN WIDE VIEWING AND NARROW VIEWING ANGLES
- LOW CURRENT TYPE
- LARGE ALLOWABLE CURRENT CAPACITY, EXCELLENT FOR PULSE DRIVE
- HIGH RELIABILITY, LONG LIFE

### APPLICATION

- LIGHT SOURCE FOR OA EQUIPMENT
- LIGHT SOURCE FOR AV EQUIPMENT
- LIGHT SOURCE FOR ILLUMINATED SWITCH

### Package Dimension



### Absolute Maximum Ratings

(Ta=25°C)

Parameter	Symbol	Red			Green		Yellow		Orange	Units
		BR	AR	PR	BG	PG(Y)	PY	AY	AA	
Forward Current	I <sub>F</sub>	50	50	30	50	50	50	50	50	mA
Peak Forward Current	I <sub>FM</sub>	300	300	100	100	100	100	100	100	mA
Reverse Voltage	V <sub>R</sub>	4			4		4		4	V
Power Dissipation	P <sub>d</sub>	100	100	75	125	125	125	125	125	mW
Operating Temperature	T <sub>opr</sub>	-30 ~ +85			-30 ~ +85		-30 ~ +85		-30 ~ +85	°C
Storage Temperature	T <sub>stg</sub>	-30 ~ +100			-30 ~ +100		-30 ~ +100		-30 ~ +100	°C

Electro-Optical Characteristics

(Ta=25°C)

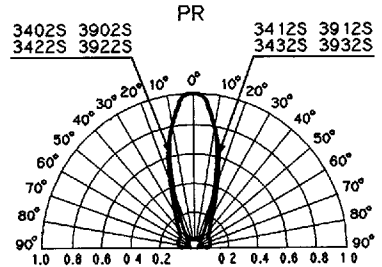
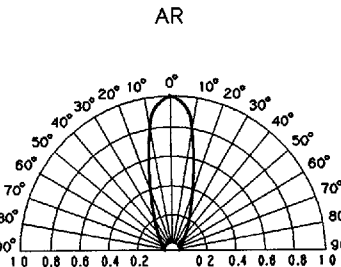
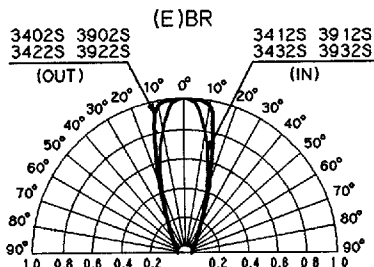
Type No.	Chip		Lens *	Iv(mcd)		at If (mA)	Peak Wave Length λp(nm)	Spectral Line Half Width Δλ(nm)	VF(V)		at If (mA)	at Va4V If(μA)	Capacitance Co(pF)
	Material	Emitted Color		Min.	Typ.				Typ.	Max.			
BR3402S (22S)	GaAlAs	Red	WC (C,C)	15.0	30.0	20	660	30	1.7	2.0	20	100	50
BR3432S (12S)	GaAlAs	Red	CD (W,D)	12.0	24.0	20	660	30	1.7	2.0	20	100	50
EBR3402S (22S)	GaAlAs	Red	WC (C,C)	30.0	60.0	20	660	30	1.7	2.0	20	100	50
EBR3432S (12S)	GaAlAs	Red	CD (W,D)	24.0	48.0	20	660	30	1.7	2.0	20	100	50
AR3402S (22S)	GaAsP	Red	WC (C,C)	2.5	5.0	20	650	30	1.7	2.0	20	100	40
AR3432S (12S)	GaAsP	Red	CD (W,D)	1.0	2.0	20	650	30	1.7	2.0	20	100	40
PR3402S (22S)	GaP	Red	WC (C,C)	2.5	5.0	10	700	100	2.1	2.5	10	100	70
PR3432S (12S)	GaP	Red	CD (W,D)	1.0	2.0	10	700	100	2.1	2.5	10	100	70
BG3402S (22S)	GaP	Green	WC (C,C)	5.0	10.0	20	555	30	2.1	2.5	20	100	50
BG3432S (12S)	GaP	Green	CD (W,D)	2.0	4.0	20	555	30	2.1	2.5	20	100	50
EBG3402S (22S)	GaP	Green	WC (C,C)	10.0	15.0	20	555	30	2.1	2.5	20	100	50
EBG3432S (12S)	GaP	Green	CD (W,D)	4.0	8.0	20	555	30	2.1	2.5	20	100	50
PG3422SY	GaP	Green	C.C	10.0	20.0	20	565	30	2.1	2.5	20	100	40
PG3432SY	GaP	Green	C.D	7.0	14.0	20	565	30	2.1	2.5	20	100	40
PY3402S (22S)	GaP	Yellow	WC (C,C)	12.0	24.0	20	570	30	2.1	2.5	20	100	40
PY3432S (12S)	GaP	Yellow	CD (W,D)	10.0	20.0	20	570	30	2.1	2.5	20	100	40
EPY3402S (22S)	GaP	Yellow	WC (C,C)	24.0	48.0	20	570	30	2.1	2.5	20	100	40
EPY3432S (12S)	GaP	Yellow	CD (W,D)	20.0	30.0	20	570	30	2.1	2.5	20	100	40
AY3402S (22S)	GaAsP/GaP	Yellow	WC (C,C)	8.0	16.0	20	580	30	2.2	2.5	20	100	40
AY3432S (12S)	GaAsP/GaP	Yellow	CD (W,D)	6.0	12.0	20	580	30	2.2	2.5	20	100	40
EAY3402S (22S)	GaAsP/GaP	Yellow	WC (C,C)	16.0	24.0	20	580	30	2.2	2.5	20	100	40
EAY3432S (12S)	GaAsP/GaP	Yellow	CD (W,D)	12.0	18.0	20	580	30	2.2	2.5	20	100	40
AA3402S (22S)	GaAsP/GaP	Orange	WC (C,C)	8.0	16.0	20	605	30	2.2	2.5	20	100	50
AA3432S (12S)	GaAsP/GaP	Orange	CD (W,D)	6.0	12.0	20	605	30	2.2	2.5	20	100	50
EAA3402S (22S)	GaAsP/GaP	Orange	WC (C,C)	16.0	24.0	20	605	30	2.2	2.5	20	100	50
AA3432S (12S)	GaAsP/GaP	Orange	CD (W,D)	12.0	18.0	20	605	30	2.2	2.5	20	100	50

\* W.C =Water Clear  
W.D =Water Diffused  
C.C =Color Clear

C.D =Color Diffused  
W.S.D=White Surface Diffused  
C.S.D =Color Surface Diffused

P.C =Pastel Color  
P.D =Pastel Diffused  
P.S.D =Pastel Surface Diffused

■ SPATIAL DISTRIBUTION

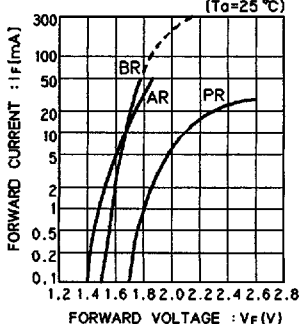


LED LAMP

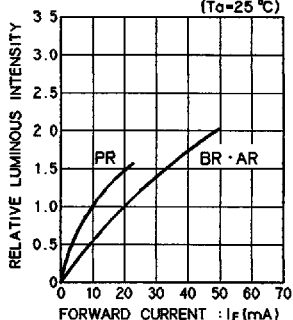
■ **RED**

55E D ■ 4678158 0001411 958 ■ IIST

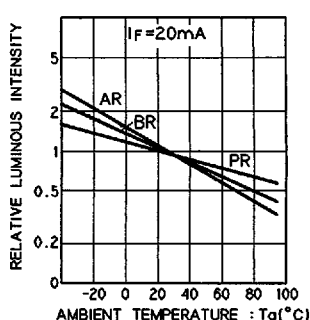
■ **FORWARD CURRENT vs. FORWARD VOLTAGE**  
( $T_o=25^\circ\text{C}$ )



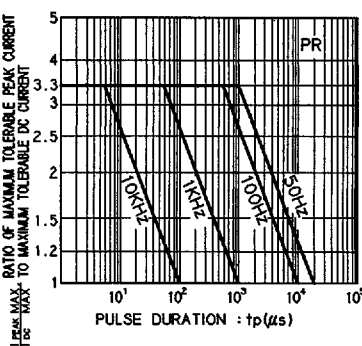
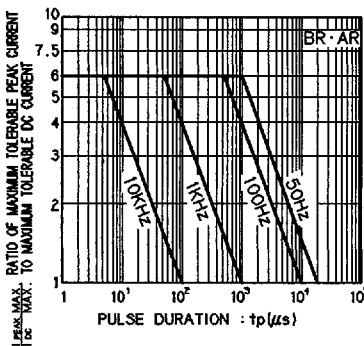
■ **RELATIVE LUMINOUS INTENSITY vs. FORWARD CURRENT**  
( $T_o=25^\circ\text{C}$ )



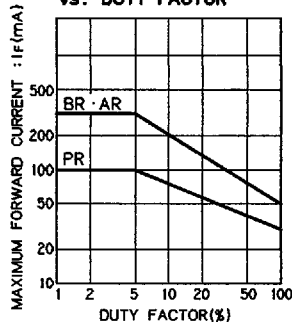
■ **RELATIVE LUMINOUS INTENSITY vs. AMBIENT TEMPERATURE**



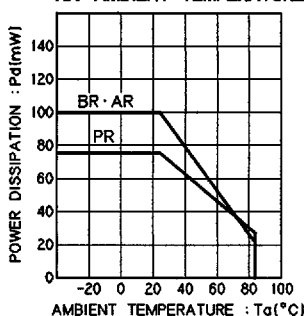
■ **MAXIMUM TOLERABLE PEAK CURRENT vs. PULSE DURATION**



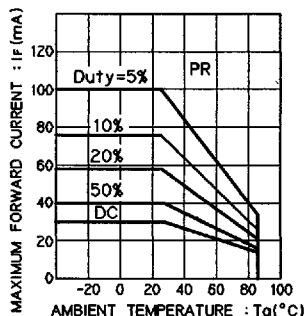
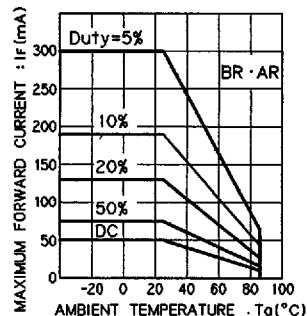
■ **MAXIMUM FORWARD CURRENT vs. DUTY FACTOR**



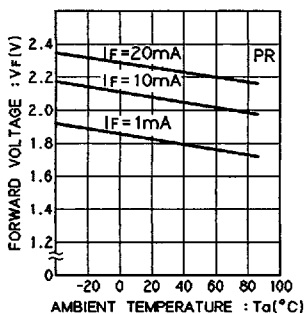
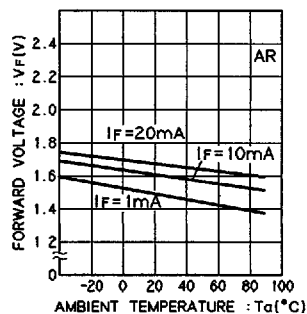
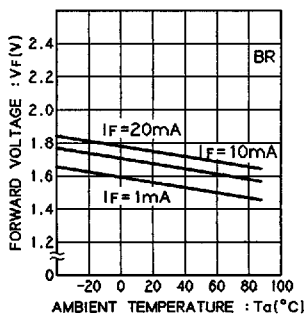
■ **POWER DISSIPATION vs. AMBIENT TEMPERATURE**



■ **MAXIMUM FORWARD CURRENT vs. AMBIENT TEMPERATURE**



■ **FORWARD VOLTAGE vs. AMBIENT TEMPERATURE**



■ GREEN

55E D

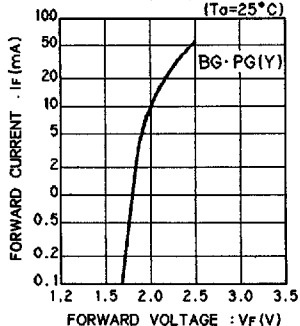
4678158

0001412

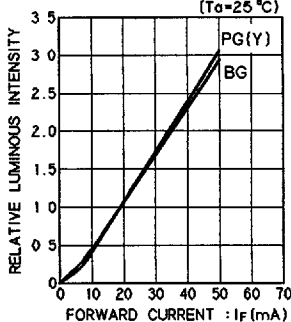
894

■ IIST T-41-21

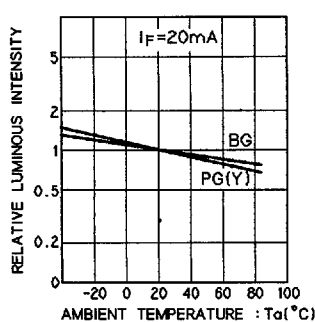
■ FORWARD CURRENT vs. FORWARD VOLTAGE (Ta=25°C)



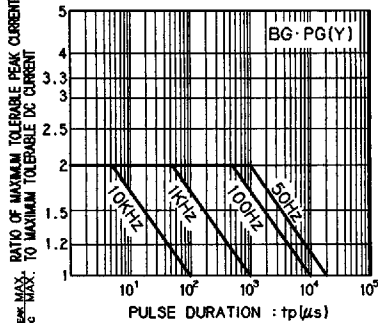
■ RELATIVE LUMINOUS INTENSITY vs. FORWARD CURRENT (Ta=25°C)



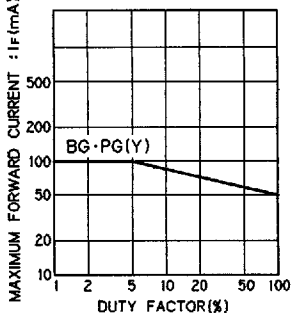
■ RELATIVE LUMINOUS INTENSITY vs. AMBIENT TEMPERATURE



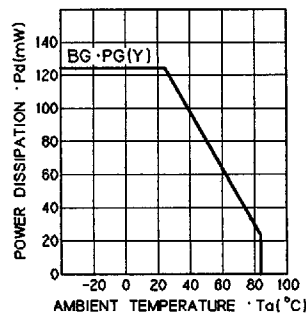
■ MAXIMUM TOLERABLE PEAK CURRENT vs. PULSE DURATION



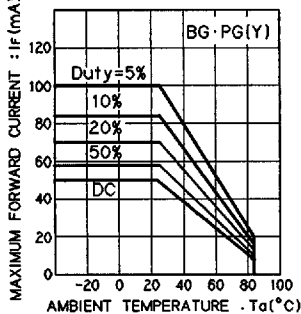
■ MAXIMUM FORWARD CURRENT vs. DUTY FACTOR



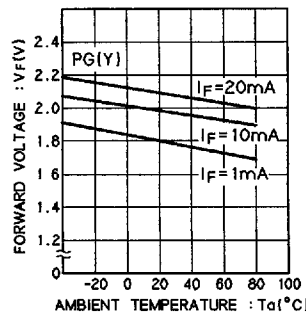
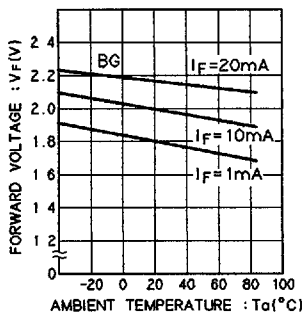
■ POWER DISSIPATION vs. AMBIENT TEMPERATURE



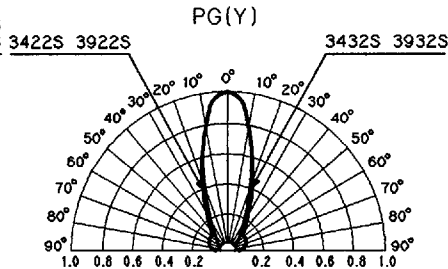
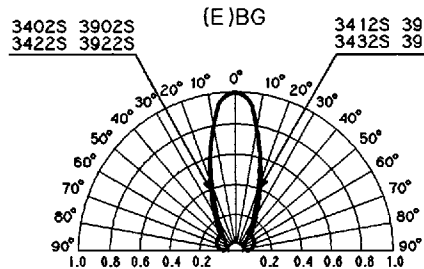
■ MAXIMUM FORWARD CURRENT vs. AMBIENT TEMPERATURE



■ FORWARD VOLTAGE vs. AMBIENT TEMPERATURE



■ SPATIAL DISTRIBUTION

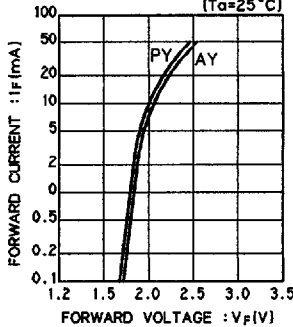


LED LAMP

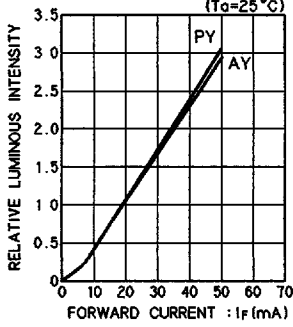
■ YELLOW

STANLEY ELECTRIC CO LTD

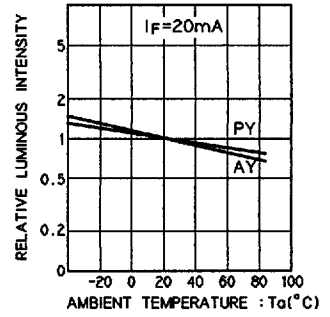
■ FORWARD CURRENT vs. FORWARD VOLTAGE (Ta=25°C)



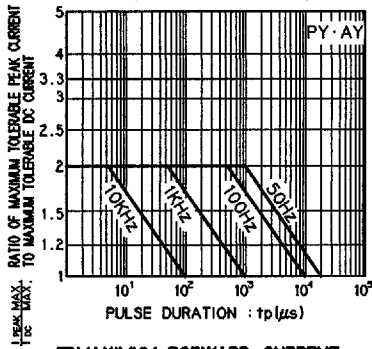
■ RELATIVE LUMINOUS INTENSITY vs. FORWARD CURRENT (Ta=25°C)



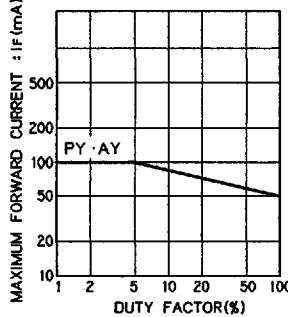
■ RELATIVE LUMINOUS INTENSITY vs. AMBIENT TEMPERATURE



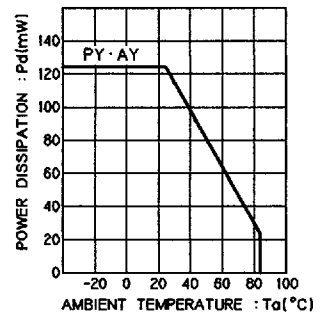
■ MAXIMUM TOLERABLE PEAK CURRENT vs. PULSE DURATION



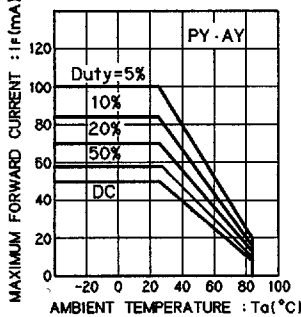
■ MAXIMUM FORWARD CURRENT vs. DUTY FACTOR



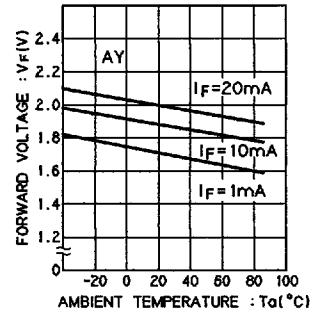
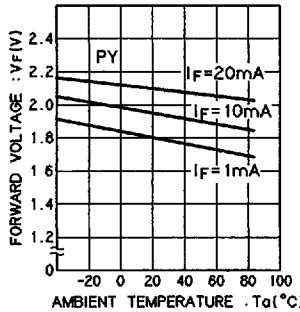
■ POWER DISSIPATION vs. AMBIENT TEMPERATURE



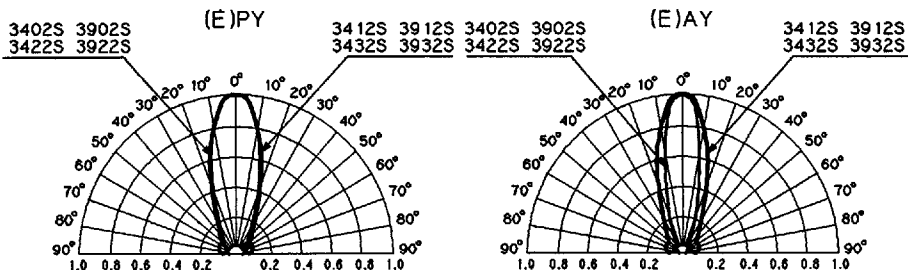
■ MAXIMUM FORWARD CURRENT vs. AMBIENT TEMPERATURE



■ FORWARD VOLTAGE vs. AMBIENT TEMPERATURE



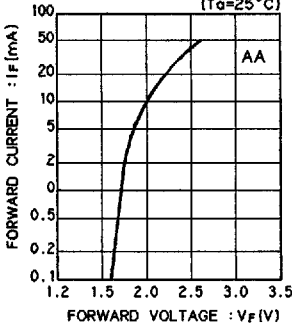
■ SPATIAL DISTRIBUTION



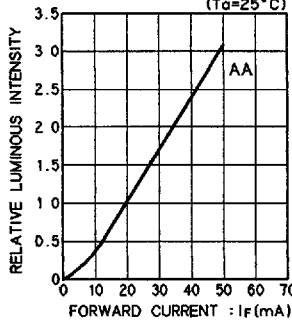
ORANGE

55E D 4678158 0001414 667 IIST

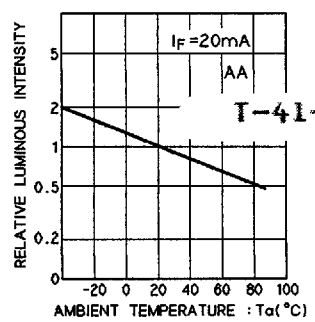
FORWARD CURRENT vs. FORWARD VOLTAGE (Ta=25°C)



RELATIVE LUMINOUS INTENSITY vs. FORWARD CURRENT (Ta=25°C)

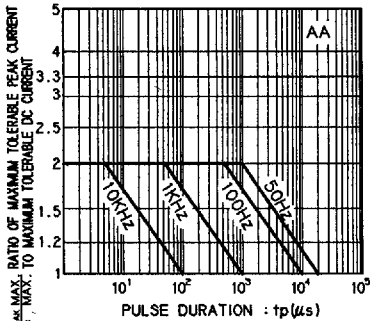


RELATIVE LUMINOUS INTENSITY vs. AMBIENT TEMPERATURE (If=20mA)

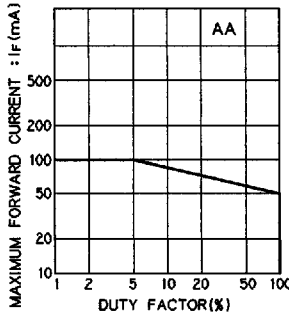


I-41-21

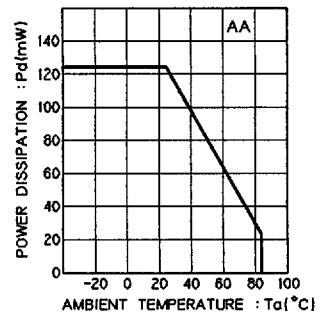
MAXIMUM TOLERABLE PEAK CURRENT vs. PULSE DURATION



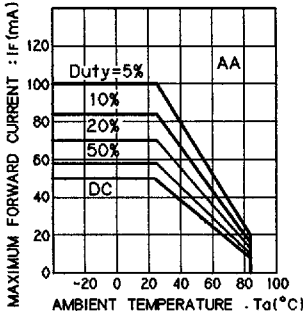
MAXIMUM FORWARD CURRENT vs. DUTY FACTOR



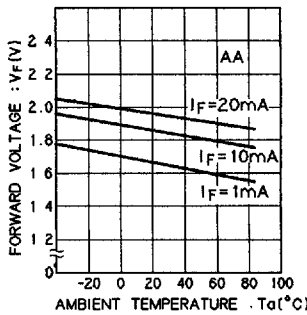
POWER DISSIPATION vs. AMBIENT TEMPERATURE



MAXIMUM FORWARD CURRENT vs. AMBIENT TEMPERATURE

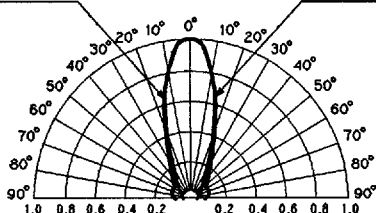


FORWARD VOLTAGE vs. AMBIENT TEMPERATURE



SPATIAL DISTRIBUTION

(E)AA  
 3402S 3902S 3412S 3912S  
 3422S 3922S 3432S 3932S



LED LAMP