



T-41-23

**STANLEY  
SUPER BRIGHT  
LED LAMP**

**RECTANGLE TYPE  
2x4mm TYPE**

**4543K | 4553K | 4503K-5 | 4523K-5 | SERIES**

**SELECTION GUIDE**

COLOR	MATERIAL	PART NUMBER
Red	GaAlAs	BR 4503K-5, 4523K-5
	GaP	PR 4543K, 4503K-5 4553K, 4523K-5
Green	GaP	(E)BG 4543K, 4503K-5 4553K, 4523K-5
	GaP	PG 4553KY
Yellow	GaP	PY 4543K, 4553K
	GaAsP/GaP	AY 4543K, 4503K-5 4553K, 4523K-5
Orange	GaAsP/GaP	AA 4543K, 4503K-5 4553K, 4523K-5

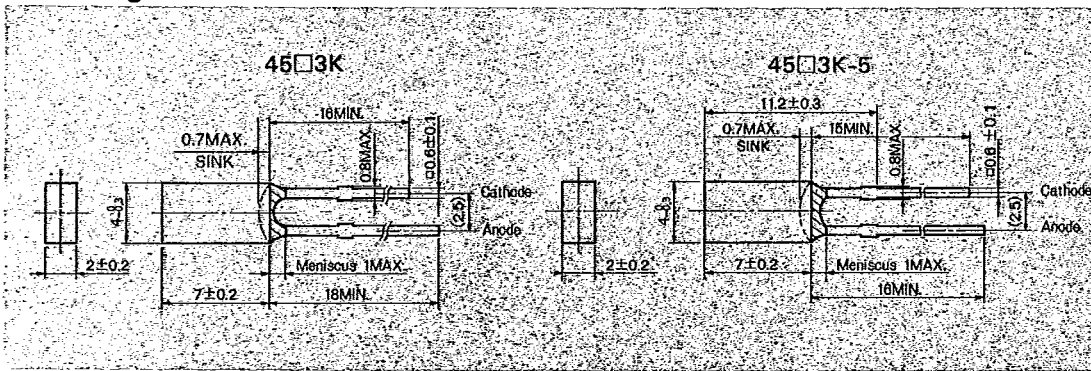
**FEATURES**

- AVAILABLE IN 4 COLORS; RED, GREEN, YELLOW AND ORANGE
- 4mm x 2mm LIGHTED AREA
- 4543K AND 4553K: DIFFUSED TYPE
- 4503K-5 AND 4523K-5: CLEAR (WATER COLOR) TYPE
- FLAT LIGHT-EMITTING SURFACE WITH UNIFORM ILLUMINATION
- LOW CURRENT DRIVE, DIRECTLY COMPATIBLE WITH IC
- QUICK RESPONSE, ALLOWING PULSED OPERATION
- HIGH RELIABILITY

**DESCRIPTION**

4543K and 4553K: Ideal for displays.  
4503K-5 and 4523K-5: Ideal for back lighting due to wide viewing angle.

**Package Dimensions—Unit in mm**



■ Absolute Maximum Ratings (Ta=25°C)

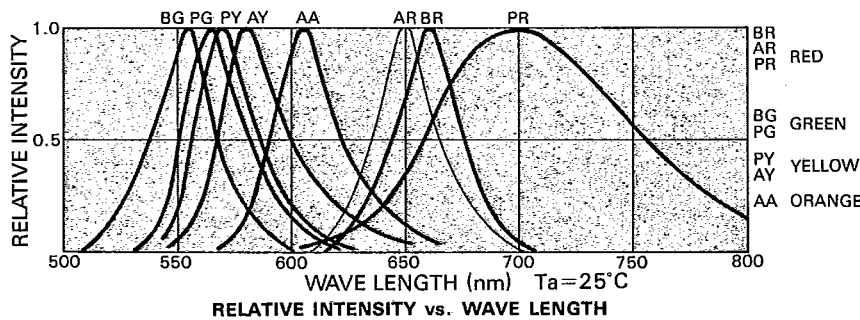
Parameter	Symbol	Red			Green		Yellow		Orange	Units
		BR	AR	PR	BG	PG	PY	AY	AA	
Forward Current	I <sub>F</sub>	50		30	50	50	50	50	50	mA
Peak Forward Current	I <sub>FM</sub>	300		100	100	100	100	100	100	mA
Reverse Voltage	V <sub>R</sub>	4			4		4		4	V
Power Dissipation	P <sub>d</sub>	100		75	125	125	125	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)

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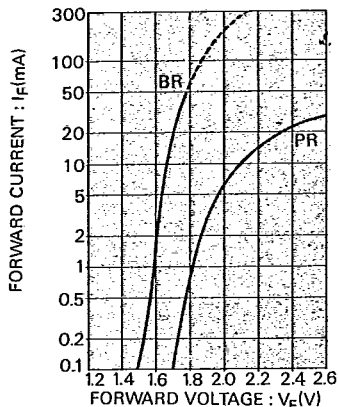
Type No.	Chip		Lens	I <sub>v</sub> (mcd)		at I <sub>F</sub> (mA)	Peak Wave Length λ <sub>p</sub> (nm)	Spectral Line Half Width Δλ(nm)	V <sub>F</sub> (V)		at I <sub>F</sub> (mA)	at V <sub>R</sub> 4V I <sub>R</sub> (μA)	Capacitance Co(pF)
	Material	Emitted Color		Min.	Typ.				Typ.	Max.			
BR4503K-5(23K-5)	GaAlAs	Red	W.C (C.C)	3.0	6.0	20	660	30	1.7	2.0	20	100	50
PR4503K-5(23K-5)	GaP	Red	W.C (C.C)	0.8	1.6	10	700	100	2.1	2.5	10	100	70
4553K(43K)	GaP	Red	C.S.D (W.S.D)	0.3	0.5	10	700	100	2.1	2.5	10	100	70
BG4503-5(23K-5)	GaP	Green	W.C (C.C)	1.5	3.0	20	555	30	2.1	2.5	20	100	50
4553K(43K)	GaP	Green	C.S.D (W.S.D)	0.5	1.0	20	555	30	2.1	2.5	20	100	50
(E)BG4503K-5(23K-5)	GaP	Green	W.C (C.C)	3.0	4.5	20	555	30	2.1	2.5	20	100	50
PG4553KY	GaP	Green	C.S.D	1.5	3.0	20	565	30	2.1	2.5	20	100	40
PY4553K(43K)	GaP	Yellow	C.S.D (W.S.D)	2.0	4.0	20	570	30	2.1	2.5	20	100	40
AY4503K-5(23K-5)	GaAsP/GaP	Yellow	W.C (C.C)	2.0	4.0	20	580	30	2.2	2.5	20	100	40
4553K(43K)	GaAsP/GaP	Yellow	C.S.D (W.S.D)	1.0	2.0	20	580	30	2.2	2.5	20	100	40
AA4503K-5(23K-5)	GaAsP/GaP	Orange	W.C (C.C)	2.0	4.0	20	605	30	2.2	2.5	20	100	50
4553K(43K)	GaAsP/GaP	Orange	C.S.D (W.S.D)	1.0	2.0	20	605	30	2.2	2.5	20	100	50

\* 45□3K-5 types have the same characteristics with those of 45□3K types

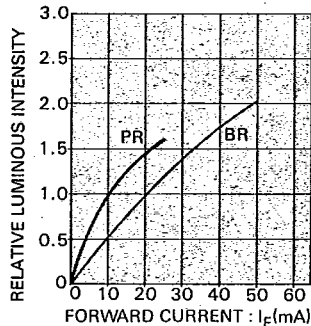


RED

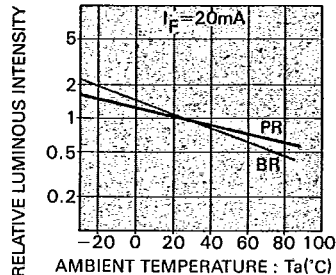
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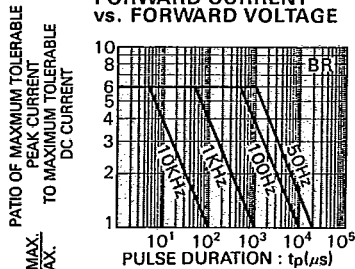
FORWARD CURRENT vs. FORWARD VOLTAGE



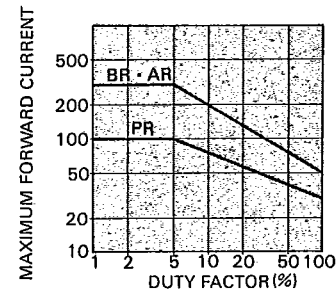
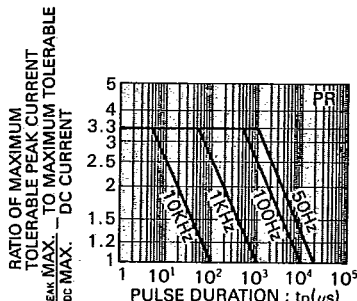
RELATIVE LUMINOUS INTENSITY vs. FORWARD CURRENT



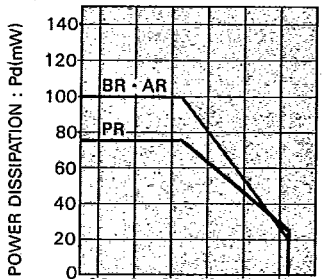
RELATIVE LUMINOUS INTENSITY vs. AMBIENT TEMPERATURE



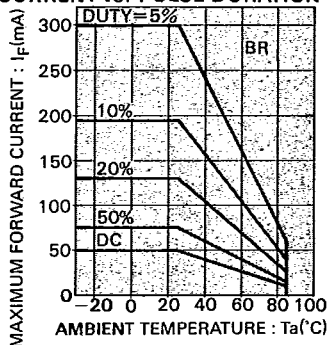
MAXIMUM TOLERABLE PEAK CURRENT vs. PULSE DURATION



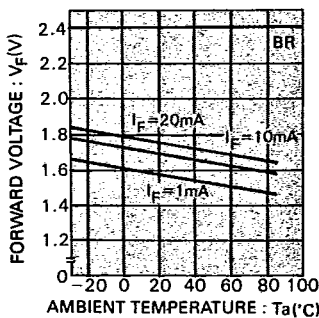
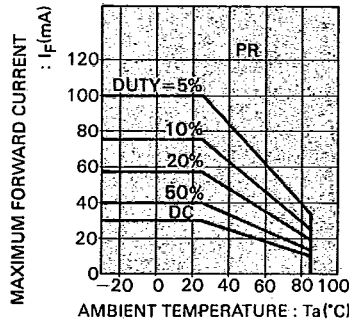
MAXIMUM FORWARD CURRENT vs. DUTY FACTOR



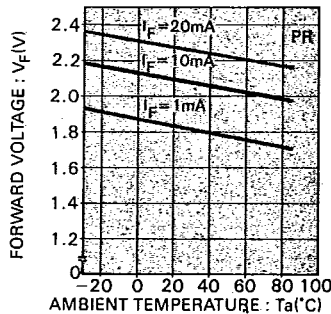
POWER DISSIPATION vs. AMBIENT TEMPERATURE



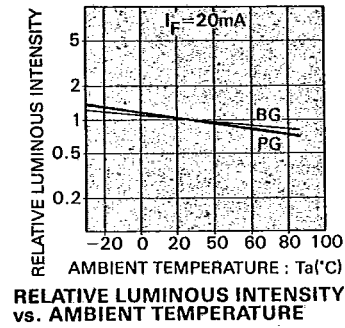
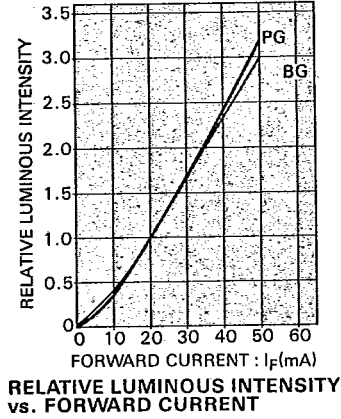
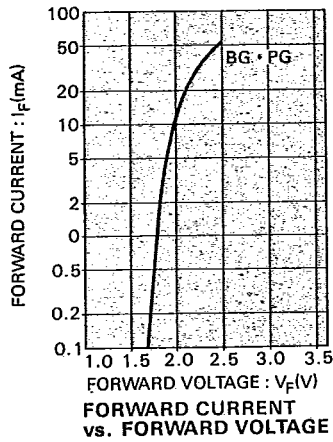
MAXIMUM FORWARD CURRENT vs. AMBIENT TEMPERATURE



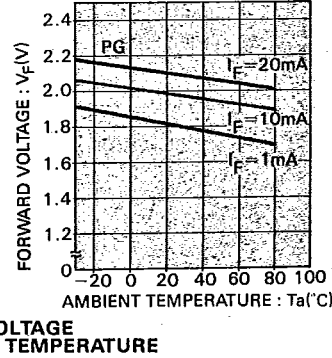
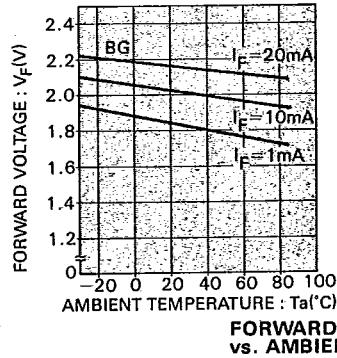
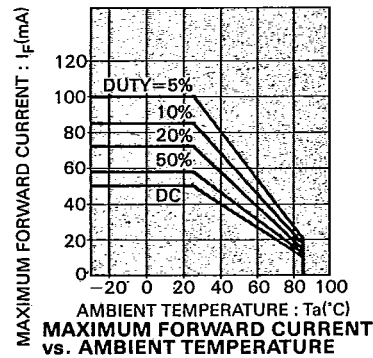
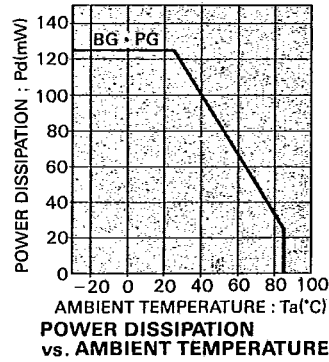
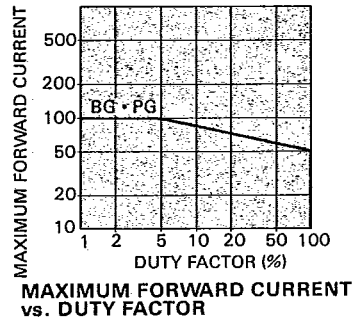
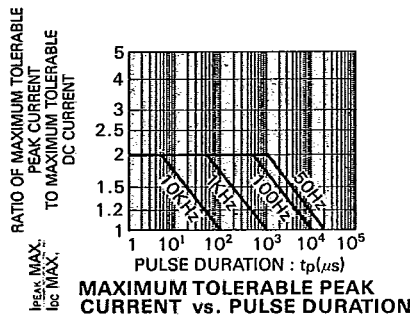
FORWARD VOLTAGE vs. AMBIENT TEMPERATURE



**GREEN**

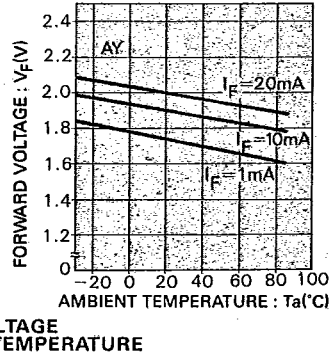
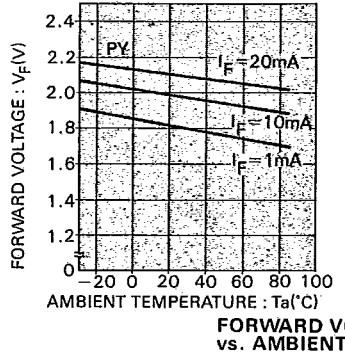
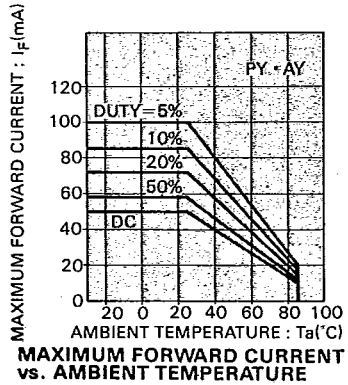
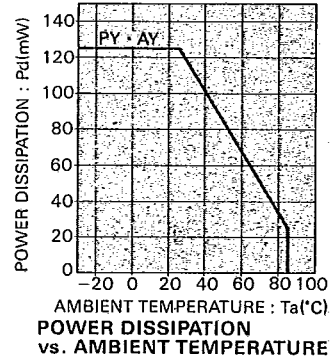
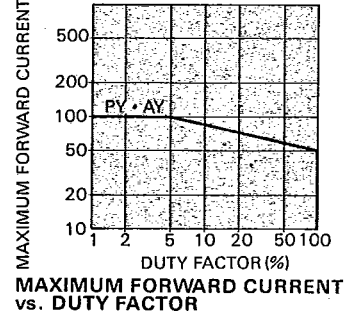
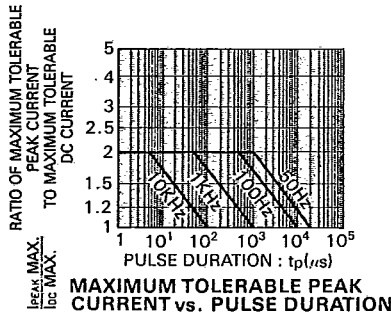
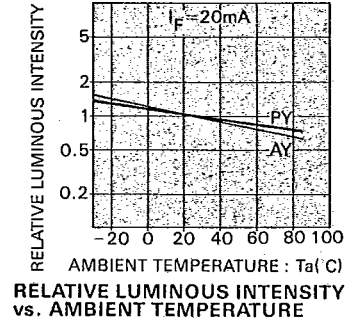
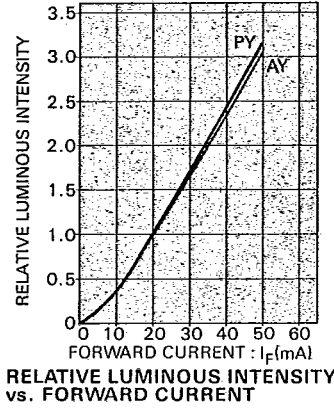
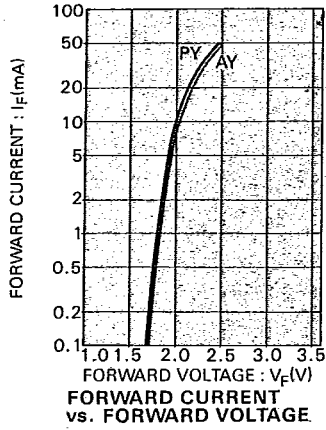


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**YELLOW**

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**ORANGE**

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