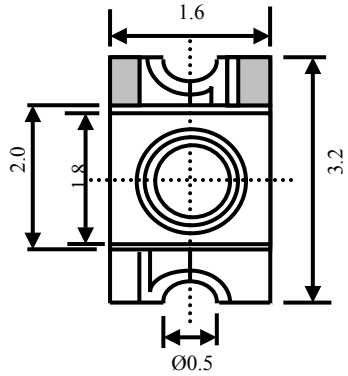
A-BRIGHT A-BRIGHT INDUSTRIAL CO., LTD.

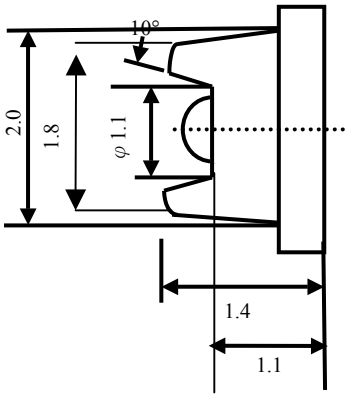
SURFACE MOUNT LED LAMPS

1206 YELLOW GREEN SMD Chip LED Lamps

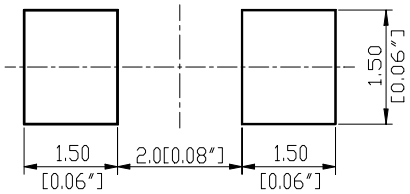
Part Number: AL-HG033A

Package outlines & Re-flow Profile

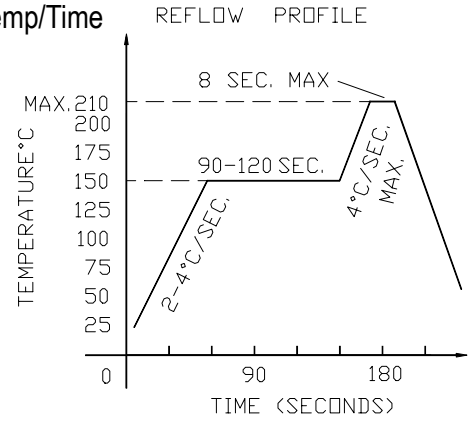




RECOMMEND PAD LAYOUT



■Reflow Temp/Time



■Soldering iron

Basic spec is ≤ 5sec when 260℃. If temperature is higher, time should be shorter (+10℃→ -1sec).Power dissipation of iron should be smaller than 15W, and temperatures should be controllable .Surface temperature of the device should be under 230℃ .

ITEM	MATERIALS
Resin (mold)	Epoxy
Lens color	Water Clear
Printed circuit board	BT
Dice	GaP/GaP
Emitted color	Yellow/Green

NOTES:

1. All dimensions are in millimeters (inches);
2. Tolerances are ±0.1mm (0.004inch) unless otherwise noted.
3. Polarity referring onto the cathode mark is reversed on the red.

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ELECTRO-OPTICAL CHARACTERISTICS (T_A=25℃)

Parameter	Test Condition	Symbol	Value	Unit
Viewing angle at 50% Iv	If=10mA	θ	60	Deg
Forward voltage (Typ.) (Max.)	If=20mA	Vf	2.10 2.60	V
CIE Coordinates X (Typ.) Y (Typ.)	If=20mA	--		--
Luminous intensity (Typ.)	If=20mA	Iv	25	mcd
WAVELENGTH λ p(nm) λ d(nm)	If=20mA		568 571	nm

Absolute maximum ratings (T_A=25℃)

Parameter	Symbol	Value	Unit
Forward current	If	30	mA
Reverse voltage	Vr	5	V
Operating temperature range	Top	-20 ~+80	℃
Storage temperature range	Tstg	-20 ~+100	℃
Peak pulsing current (1/8 duty f=1kHz)	Ifp	100	mA

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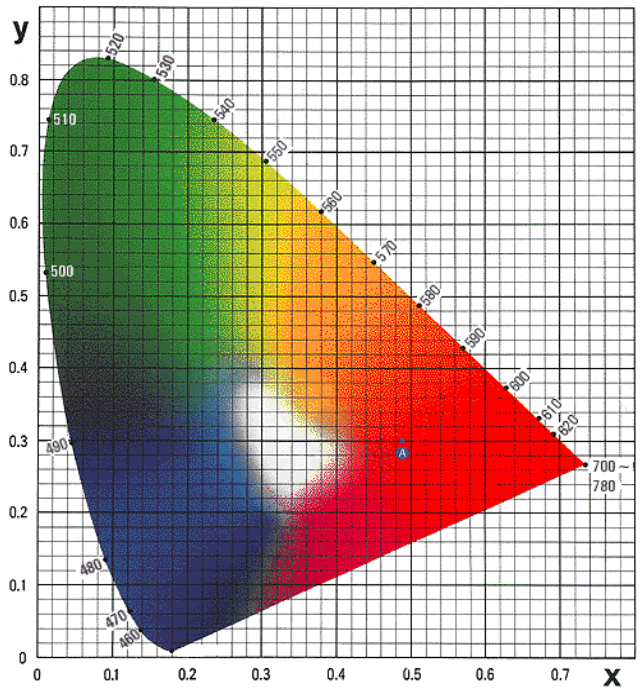
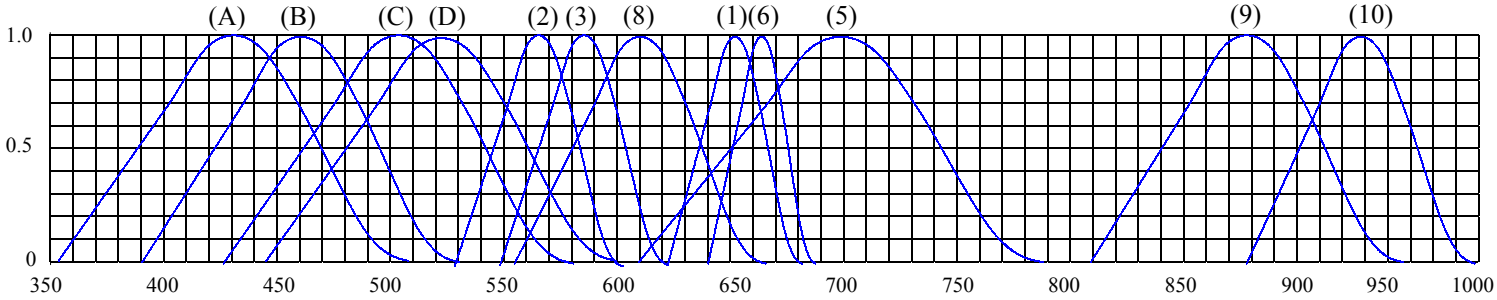
Test items and results of reliability

Type	Test Item	REF. Standard	Test Conditions	Note	Number of Damaged
Environmental Sequence	Temperature Cycle	JIS C 7021 (1977)A-4	-20℃ ⇒ 25℃ ⇒ 80℃ ⇒ 25℃ 30mins, 5mins, 30mins, 5mins	100 cycle	0/100
	Thermal Shock	MIL-STD-107D	-20℃ ⇒ 80℃ 15mins, 15mins	100 cycle	0/100
	High Humidity Heat Cycle	JIS C 7021 (1977)A-5	30℃ ⇒ 65℃ 90%RH 24hrs/1cycle	10 cycle	0/100
	High Temperature Storage	JIS C 7021 (1977)B-10	T_a=80℃	1000 hrs	0/100
	Humidity Heat Storage	JIS C 7021 (1977)B-11	T_a=60℃ RH=90%	1000 hrs	0/100
	Low Temperature Storage	JIS C 7021 (1977)B-12	T_a=－30℃	1000 hrs	0/100
Operation Sequence	Life Test	JIS C 7035 (1985)	T_a=25℃ I_F=20mA	1000 hrs	0/100
	High Humidity Heat Life Test	*	60℃ RH=90% I_F=20mA	500 hrs	0/100
	Low Temperature Life Test	*	T_a=-20℃ I_F=20mA	1000 hrs	0/100

＊Refer to reliability test standard specification for in this line.

◆ TYPICAL ELECTRICAL-OPTICAL CHARACTERISTICS CURVES



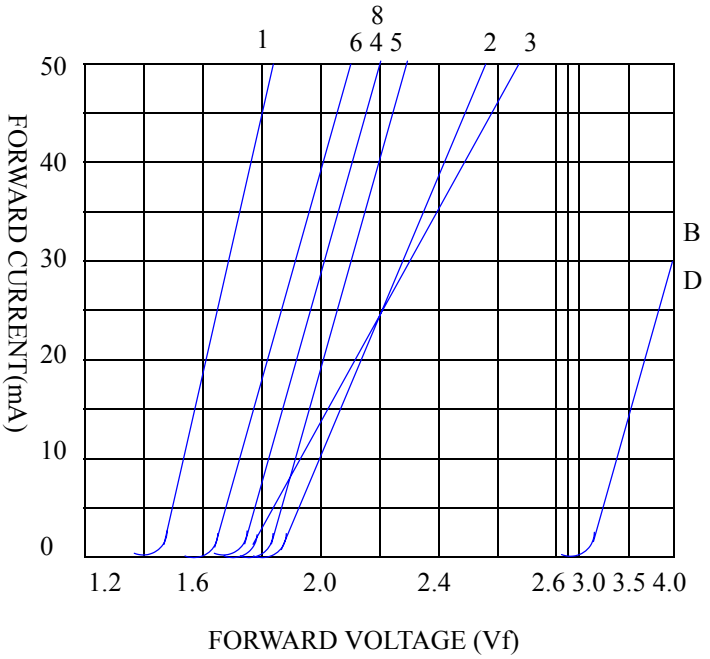


RELATIVE INTENSITY VS. WAVELENGTH(λd)

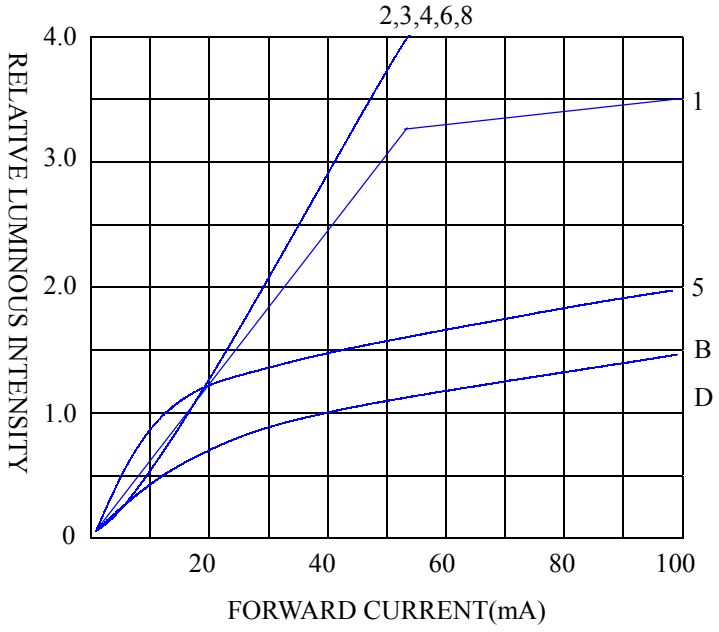
(1) wGaAsP/GaAs 655nm/Red
(2) wGaP 568nm/ Yellow Green
(3) wGaAsP/GaP 585nm/Yellow
(4) wGaAsP/GaP 635nm/Orange & Hi-Eff Red
(5) wGaP 700nm/Bright Red
(6) wGaAlAs/GaAs 660nm/Super Red
(8)wGaAsP/GaP 610nm/Super Red
(9)- GaAlAs 880nm
(10)-GaAs/GaAs&GaAlAs/GaAs 940nm
(A)- GaN 430nm/Blue
(B)- InGaN 470nm/Blue
(C)- InGaN 502nm/Ultra Green
(D)- InGaAl 523nm/Ultra Green

◆ CHARACTERISTICS DIAGRAMS

FORWARD CURRENT VS. FORWARD VOLTAGE



RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT



FORWARD CURRENT VS. AMBIENT TEMPERATURE