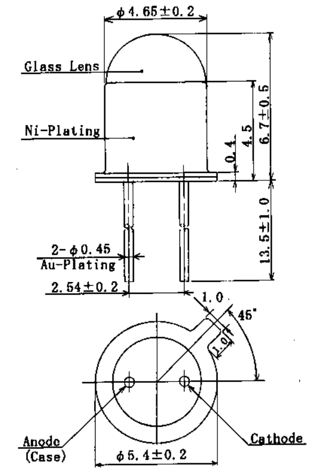
ALPHA-ONE ELECTRONICS LTD.
Kanagawa, Japan

Model No. AL880KG

Infrared Emitting Diode

RoHS Compliant



◆ FEATURES

- High Output Power (Excellent)
- Narrow Beam Angle (Excellent)
- High Reliability in Demanding Environment

◆ APPLICATIONS

- Optical Switch
- Optical Emitter

◆ Absolute Maximum Ratings

Ta = 25℃

Parameter	Symbol	Value	Unit
Forward Current (DC)	I_F	100	mA
Pulse Forward Current [*1]	I_{FP}	1.0	A
Reverse Voltage (DC)	V_R	5	V
Power Dissipation	P_D	180	mW
Operating Temperature	Topr	-20 ~ +85	℃
Storage Temperature	Tstg	-30 ~ +100	℃
Junction Temperature	Tj	100	℃
Lead Soldering Temperature [*2]	Tls	260	℃

[*1] : Tw = 10μs, T=10mS [*2] : within 5sec / up to 3.0mm from the body

◆ Electro-optical Characteristics

Ta = 25℃

Parameter	Symbol	MIN	TYP	MAX	Unit	Conditions
Power Output	P_O	--	8.0	--	mW	I_F = 50mA
Forward Voltage	V_F	--	1.45	1.8	V	I_F = 50mA
Reverse Current	I_R	--	--	10	μA	V_R = 5V
Peak Wavelength	λ_p	--	880	--	nm	I_F = 50mA
Spectral Line Half Width	$\Delta\lambda$	--	60	--	nm	I_F = 50mA
Half Intensity Beam Angle	θ	--	±4	--	deg.	I_F = 50mA
Rise Time	Tr	--	1.5	--	μS	I_{FP} = 50mA
Fall Time	Tf	--	0.8	--	μS	I_{FP} = 50mA
Junction Capacitance	Cj	--	15	--	pF	1MHz, V=0V
Temp. Coefficient of P_O	P/T	--	-0.5	--	%/℃	I_F = 10mA
Temp. Coefficient of V_F	V/T	--	-1.5	--	mV/℃	I_F = 10mA

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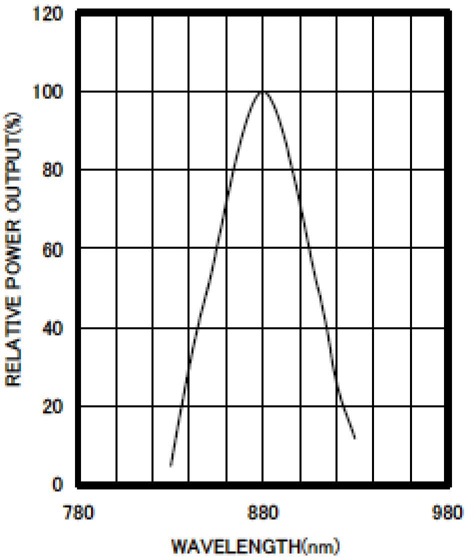
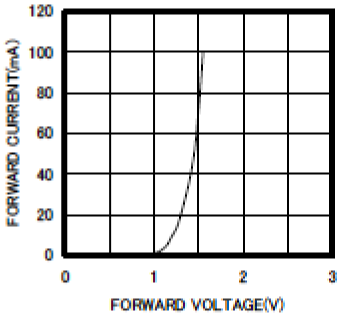
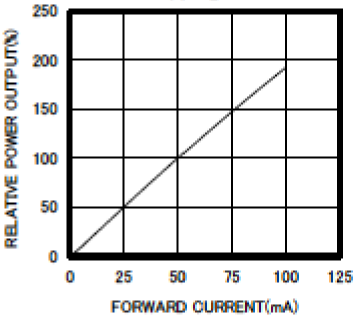
SPECTRAL OUTPUT



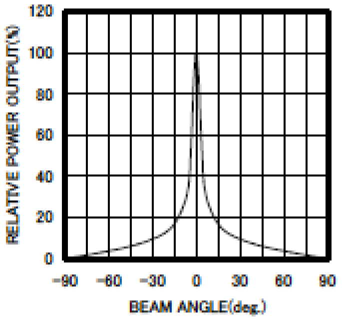
FORWARD I-V CHARACTERISTICS



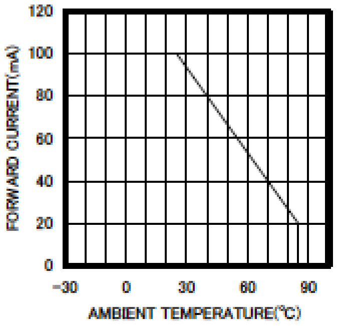
RELATIVE POWER vs FORWARD CURRENT



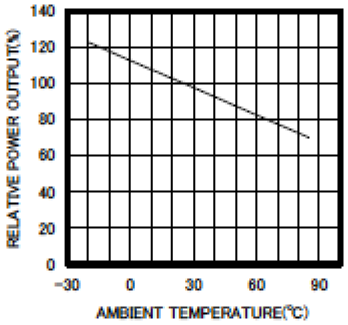
RADIATION PATTERN



THERMAL DERATING CURVE



POWER OUTPUT vs TEMPERATURE
IF=10mA



FORWARD VOLTAGE vs TEMPERATURE
IF=10mA