GL710

IrDA 1.1 Compliant Infrared Emitting Diode

■ Features

1. Compliant with IrDA1.1
2. Compliant with IrDA 1.0, ASK, DASK
3. High radiation intensity
   (MIN. 100mW/sr within±15 degree)
4. High speed (Rise time : TYP. 15ns)

■ Applications

1. Personal computers
2. Personal information tools(PDA)
3. Printers

■ Absolute Maximum Ratings

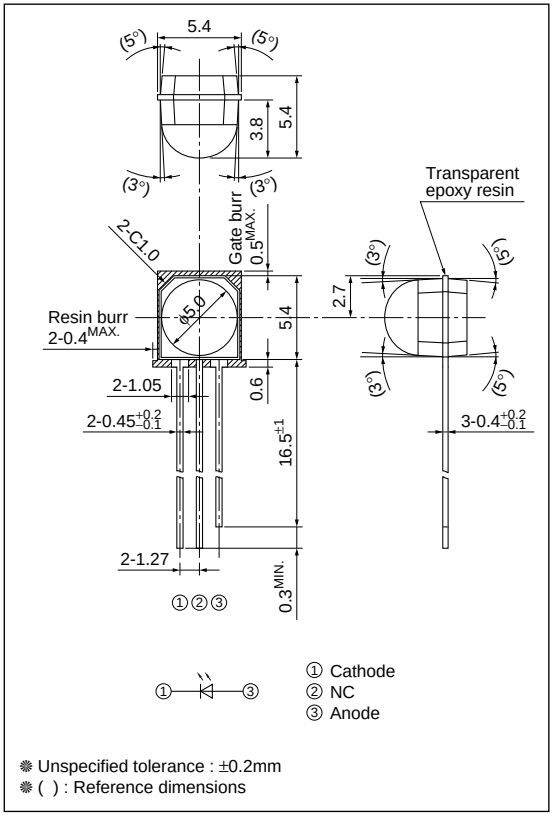
(Ta=25°C)

Parameter	Symbol	Rating	Unit
Forward current	I_F	60	mA
*1 Peak forward current	I_{FM}	0.4	A
Reverse voltage	V_R	4	V
Operating temperature	T_{opr}	−20 to +70	°C
Storage temperature	T_{stg}	−40 to +85	°C
*2 Soldering temperature	T_{sol}	260	°C

*1 Pulse width 260.4ns, Duty ratio :0.25 or Pulse width 78.1µs, Duty ratio : 3/16
*2 For MAX. 3s at the position of 1.6mm from the resin edge.

■ Outline Dimensions

(Unit : mm)



■ Electro-optical Characteristics

(Ta=25°C)

Parameter	Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Forward voltage	V_F	I_F=20mA	–	1.3	1.9	V
Peak forward voltage	V_{FM}	I_{FM}=0.3A, t_{WIN}=260.4ns, DR=0.25	–	1.9	2.8	V
Reverse current	I_R	V_R=3V	–	–	10	μA
Radiant intensity	I_E	I_{FM}=0.3A, *3ϕ<=15°	100	130	300	mW/sr
Peak emission wavelength	λp	I_F=50mA	850	880	900	nm
Spectrum radiation bandwidth	Δλ	I_F=50mA	–	40	–	nm
Half intensity angle	Δθ	I_F=50mA	–	±20	–	°
Rise time	t_r	I_F=50mA	–	15	40	ns
Fall time	t_f	I_F=50mA	–	15	40	ns

*3 Direction of mechanical axis of the lens portion : ϕ=0°.

Fig.1 Peak Forward Current vs. Ambient Temperature

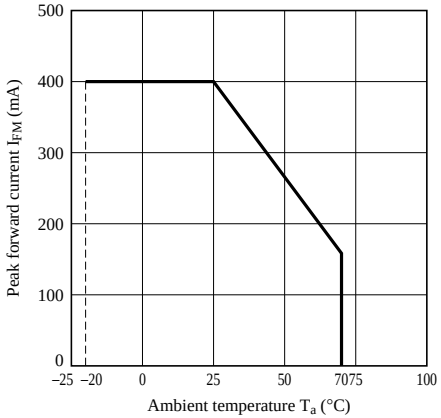


Fig.2 Spectral Distribution

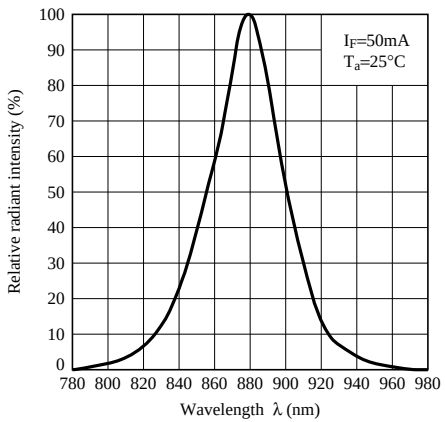


Fig.3 Peak Emission Wavelength vs. Ambient Temperature

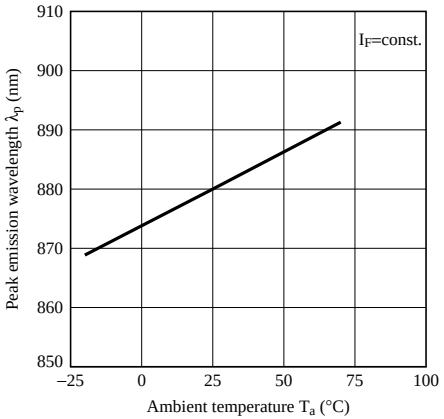


Fig.4 Forward Current vs. Forward Voltage

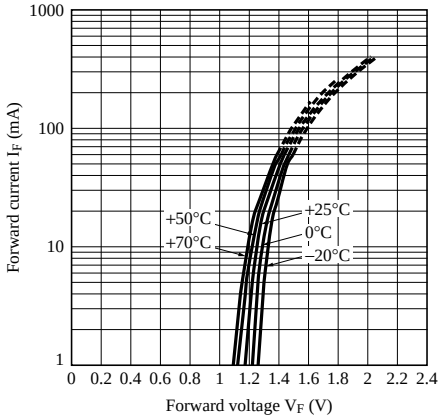


Fig.5 Relative Radiant Intensity vs. Ambient Temperature

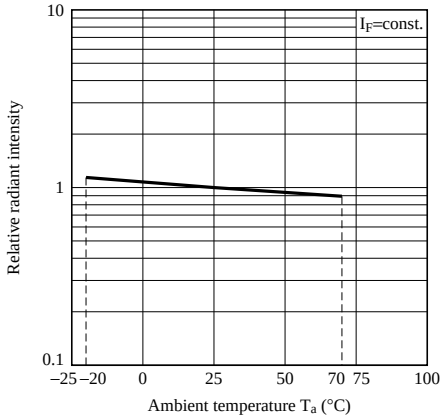


Fig.6 Radiant Intensity vs. Forward Current

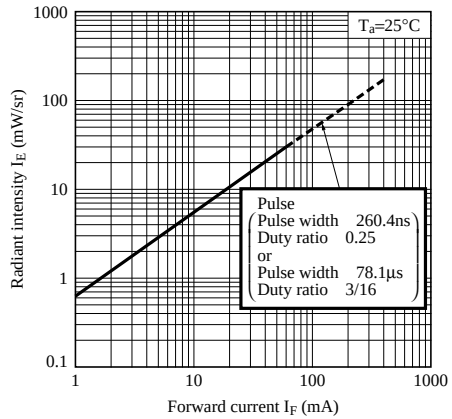


Fig.7 Radiation Diagram

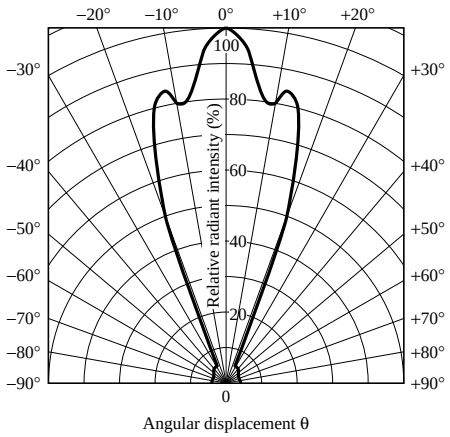
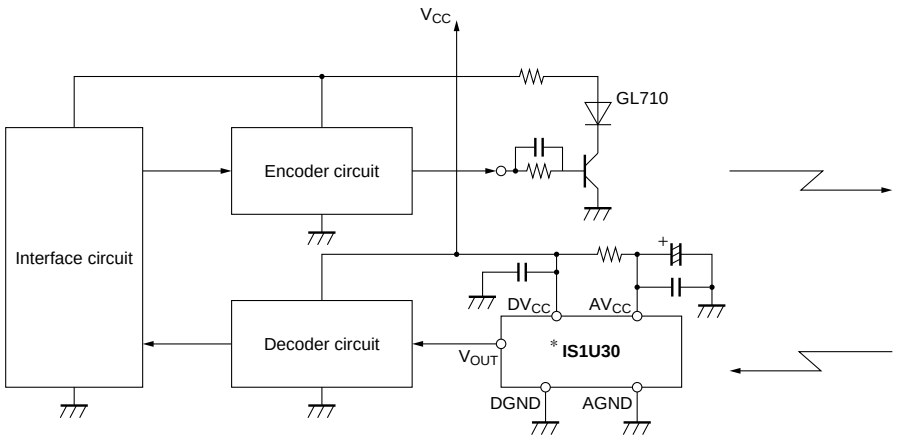


Fig.8 Example of Infrared Data Communication System



∗ We recommended to use **IS1U30** as detecting device.

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— Consumer electronics

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— Alarm equipment
— Various safety devices, etc.

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