

IR Transceiver Module

KOI-6713B

Description

The KOI-6713B is a small form package Infrared transceiver(IR) module manufactured by AUK CORP and it's ideal for various kinds of wireless mobile communications such as cellular phones, PDAs, and even POS terminals including IrFM dongles.

Fully compliant to IrDA DATA 1.4 Physical Layer Specifications and it supports the data rate from 9.6kbps to 115.2kbps with the extended link distance of 1meter. KOI-6713B also has remote control function built-in and typical link distance up to 8meters.



Features

- Compliant to IrDA 1.4 Low Power Standard
- Wide Voltage Operation : 2.4 ~ 3.6V
- Compact Package Integrated Transmitter and Receiver (7.0L x 2.70W x 1.3T)
- Complete Power Down Mode for the Current Consumption.
- LED Stuck-high Protection
- Lead-free & High reliability package
- Wide Beam angle and high radiant intensity for remote control

Applications

- Cellular Phone
- Personal Computer(Desk-top PC, Lap-top PC)
- Printers, Vending Machine, ATM
- Personal Digital Assistants.(PDA)

Absolute Maximum Ratings

[T_A = 25°C]

Parameter	Symbol	Conditions	Min.	Max.	Unit
Supply Voltage	V _{CC}	-	-0.5	5.5	V
LED Supply Voltage	V _{LED}	-	-0.5	5.5	V
Operating Temperature	T _{opr.}	-	-25	85	°C
Storage Temperature	T _{stg.}	-	-40	100	°C
DC LED Transmit Current	I _{LED} (DC)	-	-	75	mA
Peak LED Transmit Current	I _{LED} (PK)	<9(μs pulse width, <20% duty cycle	-	200	mA
Peak LED Transmit Current	I _{LED} (PK)	Remote control Mode	-	300	mA
Receiver Data Output Voltage	V _{RXD}	-	-0.5	V _{CC} +0.5	V
Transmitter Data Input Voltage	V _{TXD}	-	-0.5	V _{CC} +0.5	V

The contents of this data sheet are subject to change without advance notice for the purpose of improvement. When using this product, would you please refer to the latest specifications.

KOI-6713B

Electrical Characteristics

[TA = 2°C , V_{CC}=3.3V]

Parameter		Symbol	Conditions	Min.	Typ.	Max.	Unit
Supply Current		I _{cc1}	Shutdown	-	-	0.5	μA
		I _{cc2}	Idle	-	140	200	μA
Transmitter	T _{XD} Hold Time			25			μs
	T _{XD} Setup Time			25			μs
	T _{XD} Pulse Width			25			μs
	Shutdown Pulse Width			25	-	-	μs
	T _{XD} Wakeup Time	T _{tw}		-	15	20	μs
	Viewing Angle	2Θ _{1/2}	-	30	-	60	deg.
	Data Output Pulse Width	T _{stp} w	tpw(RxD)=1.63μs at 115.2kbit/s	1.5	1.9	2.0	μs
	Rise Time	t _r	BR=115.2kbit/s	-	50	600	ns
	Fall Time	t _f	BR=115.2kbit/s	-	100	600	ns
	Peak Emission Wavelength	λ _p	-	-	875	-	nm
	Spectral Bandwidth	Δλ	-	-	45	-	nm
Receiver	Viewing Angle	2Θ _{1/2}	-	30	-	-	deg.
	Peak Sensitivity Wavelength	λ _p	-	-	880	-	nm
	High Level Output Voltage	V _{OH}	I _{OH} =-20μA	2/3 V _{CC}	-	V _{CC}	V
	Low Level Output Voltage	V _{OL}	I _{OL} =1mA	-	-	1/3 V _{CC}	V
	Rx SIR Pulse Width	T _{srpw}	tpw(RxD)=1.63μs at 115.2kbit/s	1.4	2.2	4	μs
	Rise Time	t _r	BR=115.2kbit/s	-	50	600	ns
	Fall Time	t _f	BR=115.2kbit/s	-	50	600	ns
	Communication Distance	D		30	60	-	cm
	Receiver Latency Time	T _L		-	60	200	μs
	Receiver Wakeup Time	T _{rw}		-	50	100	μs

The contents of this data sheet are subject to change without advance notice for the purpose of improvement.
When using this product, would you please refer to the latest specifications.

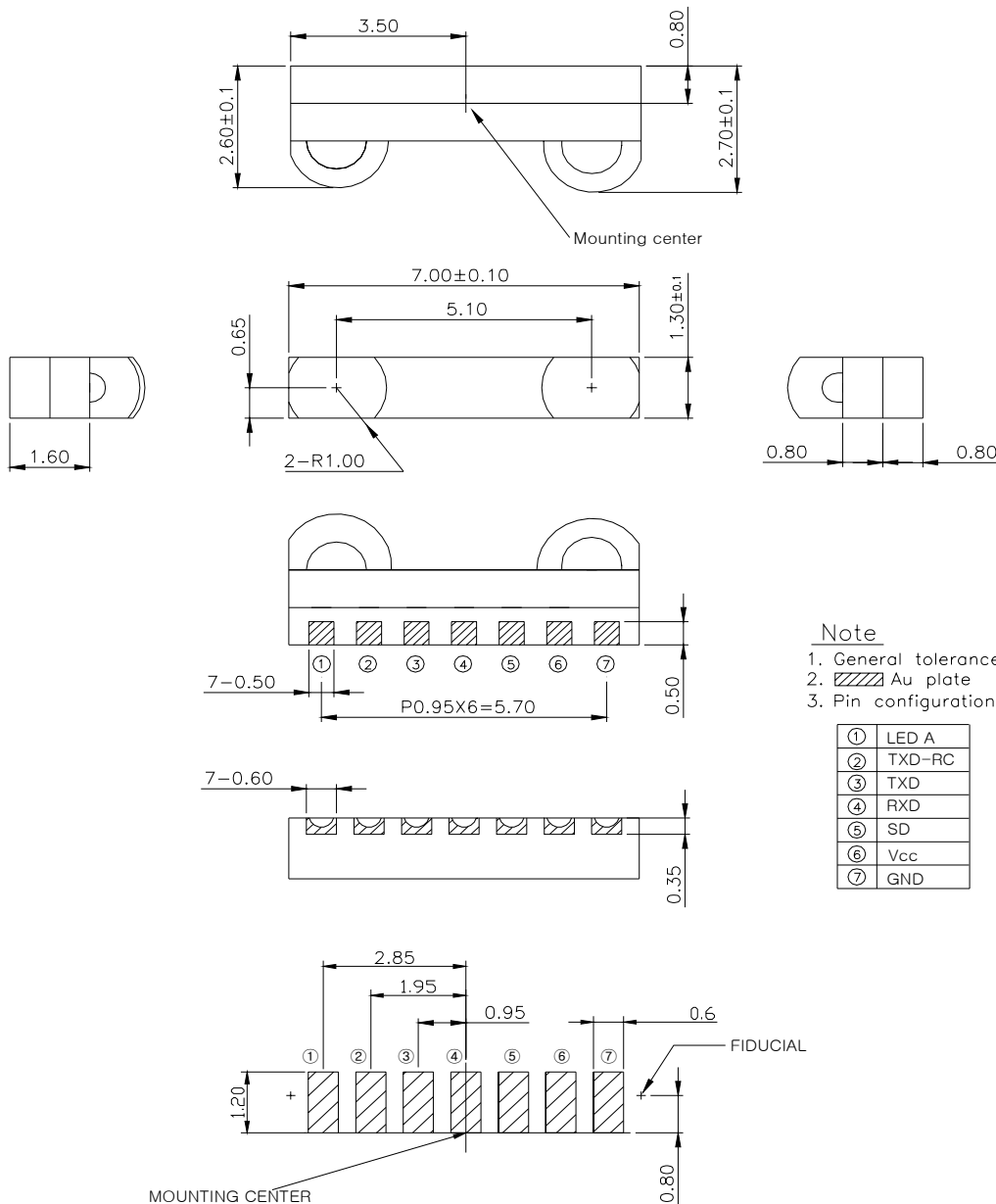
KOI-6713B

Ordering Information

Part Number	Packaging Type	Quantity
KOI-6713B	Tape and Reel	2,500

Package Outline Dimensions

(Unit : mm)



Note

- General tolerance : ±0.1mm
- Au plate
- Pin configuration

①	LED A
②	TXD-RC
③	TXD
④	RXD
⑤	SD
⑥	Vcc
⑦	GND

The contents of this data sheet are subject to change without advance notice for the purpose of improvement.
When using this product, would you please refer to the latest specifications.