

**Description**

The KOI-6713BS 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-6713BS 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 (7.40L x 2.80W x 1.45T)
- Complete Power Down Mode for the Current Consumption.
- Shielded Package for Preventing EMI
- 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<sub>A</sub> = 25°C]

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

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# KOI-6713BS

## Electrical Characteristics

[TA = 2°C , V<sub>CC</sub>=3.3V ]

Parameter		Symbol	Conditions	Min.	Typ.	Max.	Unit
Supply Current		I <sub>cc1</sub>	Shutdown	-	-	0.5	μA
		I <sub>cc2</sub>	Idle	-	140	200	μA
Transmitter	T <sub>XD</sub> Hold Time			25	-	-	μs
	T <sub>XD</sub> Setup Time			25	-	-	μs
	T <sub>XD</sub> Pulse Width			25	-	-	μs
	Shutdown Pulse Width			25	-	-	μs
	T <sub>XD</sub> Wakeup Time	T <sub>tw</sub>		-	15	20	μs
	Viewing Angle	2Θ <sub>1/2</sub>	-	30	-	60	deg.
	Data Output Pulse Width	T <sub>stpw</sub>	tpw(RxD)=1.65μs at 115.2kbit/s	1.5	1.9	2.0	μs
	Rise Time	t <sub>r</sub>	BR=115.2kbit/s	-	50	600	ns
	Fall Time	t <sub>f</sub>	BR=115.2kbit/s	-	100	600	ns
	Peak Emission Wavelength	λ <sub>p</sub>	-	-	875	-	nm
	Spectral Bandwidth	Δλ	-	-	45	-	nm
Receiver	Viewing Angle	2Θ <sub>1/2</sub>	-	30	-	60	deg.
	Peak Sensitivity Wavelength	λ <sub>p</sub>	-	-	880	-	nm
	High Level Output Voltage	V <sub>OH</sub>	I <sub>OH</sub> =-20μA	2/3 V <sub>CC</sub>	-	V <sub>CC</sub>	V
	Low Level Output Voltage	V <sub>OL</sub>	I <sub>OL</sub> =1mA	-	-	1/3 V <sub>CC</sub>	V
	Rx SIR Pulse Width	T <sub>srpw</sub>	tpw(RxD)=1.63μs at 115.2kbit/s	1.4	2.2	4	μs
	Rise Time	t <sub>r</sub>	BR=115.2kbit/s	-	50	600	ns
	Fall Time	t <sub>f</sub>	BR=115.2kbit/s	-	50	600	ns
	Communication Distance	D		30	60	-	cm
	Receiver Latency Time	TL		-	60	200	μs
	Receiver Wakeup Time	Trw		-	50	100	μs

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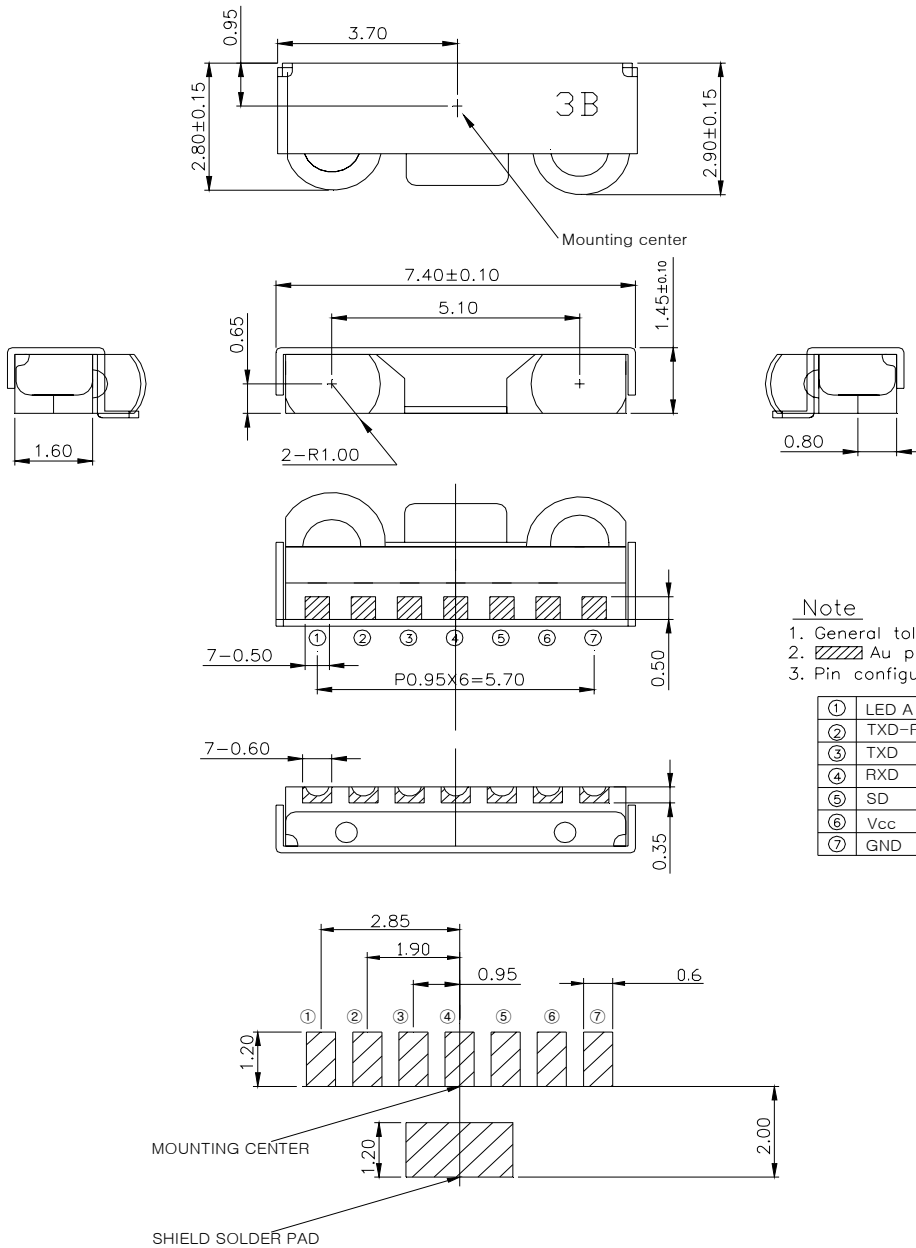
# KOI-6713BS

## Ordering Information

Part Number	Packaging Type	Quantity
KOI-6713BS	Tape and Reel	3,000

## Package Outline Dimensions

(Unit : mm)



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