## IrDA Infrared Transceivers

| Part Number | HSDL-1001 | HSDL-1100 | Units |
|---|---|---|---|
| Data Rate Range | 9.6K – 115.2K | 9.6K – 4.0M | Baud |
| Distance Range | 0 to 1 | 0 to 1 | m |
| Supply Voltage | 3 to 5 | 5 | V |
| Idle Current | 0.18 @ 5.5 V | 3 @ 5.25 V | mA |
| Shutdown Feature | Yes | No | — |
| Receiver Latency | 0.1 | 0.2 | ms |
| Operating Temp | 0 to 70 | 0 to 70 | C |
| EMI Shield | No | Available | — |
| IrDA Standard | SIR | FIR | — |
| Package Size (h x w) | 8.75 x 15 | 8.75 x 15 | mm |
| Package Options | Top, Mid, Front | Top, Front | |
| Applications | Notebook/desktop PCs, FAX modems, PDAs, handheld instruments | Notebook/desktop PCs, printers | |

## IrDA Infrared Transceivers, Small-IR

| Part Number | HSDL-2100 | HSDL-2300 | Units |
|---|---|---|---|
| Data Rate Range | 9.6K – 4.0M | 9.6K – 4.0M | Baud |
| Distance Range | 0 to 1 | 0 to 1 | m |
| Supply Voltage | 5 | 2.7 to 3.6 | V |
| Idle Current | 3 | 2.5 | mA |
| Shutdown Feature | No | Yes | — |
| Receiver Latency | 0.5 ms | 20 µs | — |
| Operating Temp | 0 to 70 | 0 to 70 | C |
| EMI Shield | Yes — integrated | Yes — integrated | — |
| IrDA Standard | FIR | FIR | — |
| Package Size (h x w) | 5.5 x 8.8 | 5.5 x 8.8 | mm |
| Applications | Notebook/desktop PCs, Data Communications, Digital Imaging, Industrial and Medical Instruments, IR LANs | | |

## IrDA Infrared Transceivers, Tiny-IR

| Part Number | HSDL-3201 | HSDL-3600 | HSDL-3610 | Units |
|---|---|---|---|---|
| Data Rate Range | 9.6K – 115.2K | 9.6K – 4.0M | 9.6K – 115.2K | Baud |
| Distance Range | 20 cm | 0 to 1 | 0 to 1 | m |
| Supply Voltage | 2.7 to 3.6 | 2.7 to 3.6 | 2.7 to 5.25 | V |
| Idle Current | 2.5 | 2.5 | 2.5 | mA |
| Shutdown Feature | Yes | Yes | Yes | — |
| Receiver Latency | 50 | 20 | 20 | µs |
| Operating Temp | 0 to 70 | -20 to +85 | -20 to +85 | C |
| EMI Shield | Yes — integrated | Yes — integrated | Yes — integrated | — |
| IrDA Standard | SIR low power option | FIR | SIR | — |
| Package Size (h x w) | 2.5 x 8.0 | 4.0 x 12.2 | 4.0 x 12.2 | mm |
| Applications | Mobile Telecom, Data Communications, Digital Imaging | Digital Imaging, Data Communications, Telecommunications, Small Industrial & Medical Instrumentation Products | | |

# Infrared Emitters[1]

| Part Number | HSDL-4220 | HSDL-4230 | HSDL-4400 | HSDL-4420 | Units |
|---|---|---|---|---|---|
| Package Size | T-1 3/4 (5) | T-1 3/4 (5) | Subminiature (2x2) | Subminiature (2x2) | mm |
| Viewing Angle | 30 | 17 | 110 | 24 | degrees |
| On Axis Intensity | 38 | 75 | 3 | 17 | mW/sr |
| Forward Voltage | 1.50 | 1.50 | 1.50 | 1.50 | V |
| Rise/Fall Time | 40 | 40 | 40 | 40 | ns |
| Operating Temp | 0 to 70 | 0 to 70 | -40 to 85 | -40 to 85 | C |
| Mounting Options | top, right angle | top, right angle | SMT top and reverse, thru-hole | SMT top and reverse, thru-hole | |
| Applications | Extended distance to IrDA IR transceivers, consumer audio/video, automotive, industrial handhelds, diffuse IR networks, control, and sensor | | Short-range IR data links, small handheld, pagers, PCMCIA cards, diagnostics/programming, board-to-board, smart cards and sensor | | |

Note 1:  Where applicable forward current is 50 mA

# Infrared Detectors[2]

| Part Number | HSDL-5400 | HSDL-5420 | Units |
|---|---|---|---|
| Package Size | Subminiature | Subminiature | — |
| Viewing Angle | 110 | 28 | degrees |
| Photocurrent @ 875 nm | 1.6 | 6.0 | μA |
| Dark Current | 1.0 | 1.0 | nA |
| Rise/Fall Time | 7.5 | 7.5 | ns |
| Operating Temp | -40 to 85 | -40 to 85 | C |
| Mounting Options | SMT top and reverse, thru-hole | SMT top and reverse, thru-hole | — |
| Applications | Short-range IR data links, small handheld, pagers, PCMCIA cards, diagnostics/programming, board-to-board, smart cards and sensor | | |

Note 2:  Where applicable incidence is 1 mW/cm$^2$

# Interface ICs

| Part Number | HSDL-7000 | HSDL-7001 | Units |
|---|---|---|---|
| Description | IrDA 3/16th Modulation IC | IrDA 3/16th Modulation IC with 16x Clock Generator | — |
| Interface to | HSDL-3201, HSDL-1001, HSDL-3600 | HSDL-3201, HSDL-1001, HSDL-3600 | |
| Operating Temperature | -10 to 85 | -10 to 85 | C |
| Package | 8 Pin SMT | 16 Pin SMT | — |

## Evaluation Kits

| Part Number | HSDL-8000 | HSDL-8001 | HSDL-8010 |
|---|---|---|---|
| Description | Evaluation Kit for IrDA applications up to 115 Kb/s | Developer Kit for IrDA applications up to 115 Kb/s; More extensive version of the HSDL-8000 | Evaluation Kit for IrDA applications up to 4 Mb/s |
| Contents | Two fully functional PCBs with HSDL-1001 and HSDL-7001; HSDL-4220 and HSDL-4230 are provided for extended distance applications; interfaces to UART or RS-232 or Super I/O chipsets that support IrDA 1.0 at 115 Kb/s | Two serial IR adapters, software, two fully functional PCBs with HSDL-1000 and HSDL-7000, HSDL-4220 and HSDL-4230 are provided for extended distance applications; interfaces to UART or RS-232 or Super I/O chipsets that support IrDA 1.0 at 115 Kb/s | Two fully functional PCBs with HSDL-1100; interfaces to Super I/O chipsets that support IrDA 1.1 at 4 Mb/s |