To:

Customer P/N:

UDE P/N: GTK-ZZ-0005

Description: RJ45 1X4 Tab Up

Through Hole, Long Body

10G Base-T

Contact Area: 50μ" Min. Gold

LED : L-Green; R-Green

Light Pipe
<table>
<thead>
<tr>
<th>Issue Date</th>
<th>Revision</th>
<th>Comments</th>
<th>Operator</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017/6/12</td>
<td>A</td>
<td>Initial Release</td>
<td>Max</td>
</tr>
<tr>
<td>2017/8/7</td>
<td>B</td>
<td>Delete 5th channel common mode pick up</td>
<td>Polly</td>
</tr>
</tbody>
</table>
1. MECHANICAL DIMENSION

Product Dimension

<table>
<thead>
<tr>
<th>Unit:mm</th>
<th>General Tolerance:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>X.X : ± 0.38</td>
</tr>
<tr>
<td></td>
<td>X.XX : ± 0.20</td>
</tr>
</tbody>
</table>

UPN&DIC

UDE

13.97X3=41.91

58.52 ±0.38
58.22 ±0.25

47.50

0.50 ±0.08 LED
0.50 ±0.08 RJ
0.2 ~ 0.6

After Pre-Soldering
Recommended PCB Layout. Component side of board
All dimension units are "mm".
All dimension tolerances are ±0.05mm unless otherwise specified.

Table 1

<table>
<thead>
<tr>
<th>Layer</th>
<th>Layout</th>
<th>Trace</th>
<th>component</th>
<th>Grounding</th>
<th>Test Point</th>
<th>Via Hole</th>
<th>PTH</th>
<th>NPTH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Component side</td>
<td></td>
<td>X</td>
<td>X</td>
<td>O</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>O</td>
</tr>
<tr>
<td>Inner layer</td>
<td></td>
<td>O</td>
<td>NA</td>
<td>O</td>
<td>NA</td>
<td>O</td>
<td>X</td>
<td>O</td>
</tr>
<tr>
<td>Bottom side</td>
<td></td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>X</td>
<td>O</td>
</tr>
</tbody>
</table>

X--Forbid; O--OK; NA--Not Applicable.
2. Packing Information
   16 pcs finished goods per tray
   7 trays (112 pcs finished goods) per inner box
   4 Inner boxes (448 pcs finished goods) per master carton

- All dimensions follow:
  FCC subpart F, 68,500, Figure (C)(2)(i) & (C)(2)(ii) & (C)(3)(i)
  IEC 60603-7
- All plugs must be meeting the requirements of plug Go & No-Go gauge.
  Gauge follow: FCC subpart F, 68,500, Figure (C)(4)(i) & (C)(5)(i)
- There must be no damage to Housing and Locking Latch.
- There must be no nicks and cuts in cable.
- Durability: 750 cycles generally
4. REQUIREMENTS

Design and Construction

Product shall be of design, construction and physical dimensions specified on applicable.

Material

Terminal Parts (Underplating : 50μ"min Nickel overall)
   - RJ Terminal : Phosphor Bronze, Thickness=0.30mm
   - Finish : Contact Area : 50u" Min.Gold
   - Input Terminal : Brass, Thickness=0.35mm
   - Finish : 100μ" min. Matte. Tin
   - Case Terminal : Brass, Thickness=0.30mm
   - Finish : 100μ" min. Matte. Tin

Plastic Parts <UL94V-0>
   - Housing : PA6T, Black
   - Case : PA6T, Black
   - Spacer : PA6T, Black
   - Holder : PA6T, Black
   - Light Pipe : PC, Transparent

Shield Parts
   - Front Shield : Stainless Steel, Thickness=0.20mm, unplating
   - Back Shield : Stainless Steel, Thickness=0.20mm, Pre-soldering
5. Operating and Storage Temperature
   Operating Temperature: 0°C to +70°C
   Storage Temperature: -40°C to +85°C

6. RJ45 specifications
   Insulation Resistance: 500MΩ min.
   Insertion force with the latch depressed: 20N max.
   Removal force with the latch depressed: 20N max.
   Locking Force of Plug Latch: 50N min. @ 60+/−5 sec.
   Durability: 2500 cycles

7. Performance and Test Description
   Product is designed to meet electrical, mechanical and environmental performance requirements specified in below table.
   All tests are performed at ambient environmental conditions per MIL-STD-1344A and EIA-364 unless otherwise specified.

8. Packaging and Packing
   All parts shall be packaged and packed to protect against physical damage, corrosion and deterioration during shipment and storage.
9. ELECTRICAL CHARACTERISTICS @ 25°C

<table>
<thead>
<tr>
<th>Emitting Color</th>
<th>λp (nm)</th>
<th>Vf @If=20mA</th>
<th>Ir @Vr=5V</th>
</tr>
</thead>
<tbody>
<tr>
<td>Green</td>
<td>570</td>
<td>1.7 ~2.6 V</td>
<td>10μA max.</td>
</tr>
</tbody>
</table>
Transmitter filter & Receiver filter

Type: Balance low pass 100Ω impedance

Insertion loss: 1~400MHz -2.0dB(-1.4TYP) max.

Return loss:
- 1MHz -20dB Min. load 100Ω
- 100MHz -20dB Min. load 100Ω
- 200MHz -18dB Min. load 100Ω
- 300MHz -15dB Min. load 100Ω
- 400MHz -10dB Min. load 100Ω
- 500MHz -8dB Min. load 100Ω

Reflected CM to Diff Conversion (REF)
- 50MHz -30dB Min.
- 100MHz -27dB Min.
- 200MHz -24dB Min.
- 300MHz -22dB Min.
- 400MHz -21dB Min.
- 500MHz -20dB Min.

Reflected Diff to CM Conversion (REF)
- 1MHz -48dB Min.
- 100MHz -35dB Min.
- 400MHz -24dB Min.
- 500MHz -24dB Min.

CM to Diff Conversion (REF)
- 50MHz -48dB Min.
- 100MHz -42dB Min.
- 200MHz -36dB Min.
- 300MHz -33dB Min.
- 400MHz -30dB Min.
- 500MHz -28dB Min.

CM to CM Attenuation (REF)
- 1MHz -22dB Min.
- 500MHz -20dB Min.
- 800MHz -20dB Min.
- 1000MHz -17dB Min.
### Cross Talk (REF)

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Minimum level</th>
</tr>
</thead>
<tbody>
<tr>
<td>1MHz</td>
<td>-34dB Min.</td>
</tr>
<tr>
<td>350MHz</td>
<td>-23dB Min.</td>
</tr>
<tr>
<td>500MHz</td>
<td>-23dB Min.</td>
</tr>
</tbody>
</table>

### Inductance (OCL) @ 25°C, 100KHz, 100mV, 8mA DC BIAS

Input(TRD1+, TRD1-); (TRD2+, TRD2-); (TRD3+, TRD3-); (TRD4+, TRD4-): 160uH Min.

### HiPot Test

PHY Side(input) To Cable Side(output): 1500Vac 60s or 2250Vdc 60s
10. WAVE SOLDERING TEMPERATURE PROFILE

Note:
The measuring point for the specified temperature shall be on the soldered part of the lead.