

| APPLICABLE STANDARD   |   |   |   |   |                  |
|---|---|---|---|---|------------------|
| Operating condition   | Characteristic impedance                  | Differential 100 [ohm]  | Operating temperature range                                 | -10 to +85 [deg. C] (85 %RH MAX)<br>No freezing and condensing  |                  |
|   | Storage temperature Range<br>(At packing) | -10 to +60 [deg. C] (93 %RH MAX)  | Storage temperature Range (after mounting, but not working) | -40 to +85 [deg. C] (85 %RH MAX)<br>No freezing and condensing  |                  |
|   | Applicable connector                      | BF4-IR2 plug (Terminated optical fiber)   |   |   |                  |
| <b>SPECIFICATIONS</b>   |   |   |   |   |                  |
| ITEM  |   | TEST METHOD   |   | REQUIREMENTS  | QT AT            |
| <b>CONSTRUCTION</b>   |   |   |   |   |                  |
| Dimension, Construction and Finishing                                       |   | Check visually and measure the dimension by dimensional measurement equipments  |   | According to drawing  | X X              |
| Marking   |   | Check visually  |   |   | X X              |
| <b>ELECTRIC PERFORMANCE</b>   |   |   |   |   |                  |
| Data transmission performance   |   | Measure eye diagram of output signal during input 200mVp PRBS7 differential signal (*1)   |   | No mask hit at 0.05 to 6.25 Gbps.   | X -              |
| Voltage proof   |   | 200 V AC for 1 min.<br>(Shall be tested this product alone.)  |   | No flashover or breakdown.  | X X              |
| <b>MECHANICAL CHARACTERISTICS</b>   |   |   |   |   |                  |
| Insertion and extraction forces   |   | Measure the force at the mating speed less than 12.5mm/min  |   | Insertion force : 25N MAX<br>Extraction force : 25N MAX   | X -              |
| Durability  |   | 1000 cycles of mating and extraction. (*1)  |   | No looseness, breakage and cracks<br>(Visual and data rate check)   | X -              |
| Vibration   |   | Vibration for 10 cycles in 3 directions, at an amplitude of 1.5 mm with the frequency range 10 to 55 [Hz].(*1)  |   |   | X -              |
| Shock   |   | 3 times and 3 directions with the acceleration 490 [m/s <sup>2</sup> ] in duration 11 ms. (*1)  |   |   | X -              |
| <b>ENVIRONMENTAL CHARACTERISTICS</b>  |   |   |   |   |                  |
| Transportation and storage temperature and humidity test                    |   | Applying temperature and humidity load as below<br>Before test measurement 23 deg.C<br>Cold test -20 deg.C (soak time: 72hours)<br>Intermediate measurement 23 deg.C<br>Damp heat test +60 deg.C, 90%Rh (soak time: 72hours)<br>After test measurement 23 deg.C |   | No looseness, breakage and cracks<br>(Visual and data transmission check before test, intermediate test and after test) | X -              |
| Temperature cycling   |   | Temperature : -40 to +85 deg C<br>Time : 10 [min] to 10 [min]<br>Number of cycle : 100 cycles (*1)  |   |   | X -              |
| High temperature storage  |   | Temperature : 85 deg C Time : 1000 hours (*1)   |   |   | X -              |
| Low temperature storage   |   | Temperature : -40 deg C Time : 1000 hours (*1)  |   |   | X -              |
| Temperature and humidity cycling  |   | Temperature, Humidity: 10 ⇄ 65 degree Celsius, 93%RH w/o applying current. Number of cycle: 10 cycles, Cycle time: 24 hours/cycle<br><br><div style="text-align: center;"> </div>   |   |   | X -              |
| COUNT   | DESCRIPTION OF REVISIONS                  |   | DESIGNED  | CHECKED   | DATE             |
| △   |   |   |   |   |                  |
| REMARK<br>(*1) Shall be checked by mating with BF4M cable assembly (Tx-Rx). |   |   | APPROVED  | YY.HIYAMA   | 20200907         |
|   |   |   | CHECKED   | TS.YAMAZAKI   | 20200907         |
|   |   |   | DESIGNED  | TY.SATO   | 20200907         |
|   |   |   | DRAWN   | SK.AOYAMA   | 20200907         |
| Note QT: Qualification Test, AT: Assurance Test                             |   |   | DRAWING NO.   |   | ELC-384993-01-00 |
| <b>HRS</b>  | SPECIFICATION SHEET                       |   | PART NO.  | BF4-IR2-16P-0.5SH(01)   |                  |
|   | HIROSE ELECTRIC CO., LTD.                 |   | CODE NO.  | CL831-1020-0-01   | △ 1/2            |

| SPECIFICATIONS               |  |  |  |    |    |
|------------------------------|--|--|--|----|----|
| ITEM                         | TEST METHOD  |  | REQUIREMENTS   | QT | AT |
| Solderbility                 | The duration and temperature of immersion shall be 245 +/- 3 °C 3 +/-1 0.3 sec |  | All leads shall be exhibit a continuous solder coating free from defect for a minimum of 95% of the critical area of any individual lead | X  | -  |
| Resistance to soldering heat | Reflow 2times in the Fig-1 codition  |  | No critical connector deformation or looseness of contacts   | X  | -  |

Fig-1. Reflow codition of resitance to soldering heat  
(Tempearature at the top surface of connector)

Fig-2 Recommended reflow profile temperature (Tempearature at SMT leads)

|  |                           |             |          |                       |     |
|--|---------------------------|-------------|----------|-----------------------|-----|
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|  | SPECIFICATION SHEET       |             | PART NO. | BF4-IR2-16P-0.5SH(01) |     |
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