

Jan.1.2020 Copyright 2020 HIROSE ELECTRIC CO., LTD. All Rights Reserved.  
In case of consideration for using Automotive equipment / device which demand high reliability, kindly contact our sales window correspondents.

| COUNT  | DESCRIPTION OF REVISIONS    | BY   | CHKD                       | DATE                       | COUNT  | DESCRIPTION OF REVISIONS | BY                        | CHKD                   | DATE     |
|--|-----------------------------|--|----------------------------|----------------------------|--|--------------------------|---------------------------|------------------------|----------|
| △  | 5 RE-S-00357                | T.Y  | Y.M                        | 01.10.20                   | △  |                          |                           |                        |          |
| △  |                             |  |                            |                            | △  |                          |                           |                        |          |
| APPLICABLE STANDARD  |                             | ・ JIS C 5973 (F04 TYPE CONNECTORS FOR OPTICAL FIBER CABLES)<br>・ No. 520064 "SPECIFICATION OF OPTICAL ATTENUATOR TYPE SC" BY NTT CO. |                            |                            |  |                          |                           |                        |          |
| RATING   | OPERATING TEMPERATURE RANGE | -40°C ~ 75°C   |                            |                            | STORAGE TEMPERATURE RANGE  | -40°C ~ 85°C             |                           |                        |          |
|  | POWER                       | 250 mW   |                            |                            | APPLICABLE CABLES  | SM                       |                           |                        |          |
| <b>SPECIFICATIONS</b>  |                             |  |                            |                            |  |                          |                           |                        |          |
| ITEM   |                             | TEST METHOD (JIS C 5961)   |                            |                            | REQUIREMENTS   |                          |                           | QT                     | AT       |
| <b>CONSTRUCTION</b>  |                             |  |                            |                            |  |                          |                           |                        |          |
| VISUAL EXAMINATION   |                             | INSPECTION OF APPEARANCE, DIMENSION AND MASS   |                            |                            | ACCORDING TO DRAWING   |                          |                           | ○                      | ○        |
| MARKING  |                             | CONFIRMATION VISUALLY  |                            |                            | ACCORDING TO DRAWING   |                          |                           | ○                      | ○        |
| <b>OPTICAL CHARACTERISTICS</b>                                 |                             |  |                            |                            |  |                          |                           |                        |          |
| ATTENUATION  |                             | MEASUREMENT AT A POINT WITHIN WAVELENGTH 1310±30nm AND A POINT WITHIN WAVELENGTH 1550±30nm△  |                            |                            | 0, 1, 2±0.5<br>3, 4, 5, 6±0.6 dB<br>10±1dB<br>15, 20, 25±1.5dB<br>30±2.5dB   |                          |                           | ○                      | ○        |
| RETURN LOSS  |                             | MEASUREMENT AT A POINT WITHIN WAVELENGTH 1310±30nm AND A POINT WITHIN WAVELENGTH 1550±30nm△  |                            |                            | ≥40dB  |                          |                           | ○                      | ○        |
| POWER TEST   |                             | POWER:250mW, TIME:100 HOURS<br>LASER:LD (WAVELENGTH:1470nm)  |                            |                            | CHANGE IN ATTENUATION : ±0.2dB   |                          |                           | ○                      | -        |
| <b>MECHANICAL CHARACTERISTICS</b>                              |                             |  |                            |                            |  |                          |                           |                        |          |
| ENGAGEMENT AND SEPARATION FORCES                               |                             | ENGAGEMENT AND SEPARATION FORCES AT 50mm/s   |                            |                            | ENGAGEMENT FORCE: ≤19.6N<br>SEPARATION FORCE: ≤19.6N   |                          |                           | ○                      | -        |
| GAUGE RETENTION FORCE  |                             | ZIRCONIA GAUGE AT φ 2.499±0.0005mm   |                            |                            | 2.0N~3.9N  |                          |                           | ○                      | -        |
| MATING DURABILITY  |                             | INSERTION AND EXTRACTION NUMBER:500  |                            |                            | ①ATTENUATION AND RETURN LOSS SHALL BE SATISFIED BEFORE AND AFTER THE TEST.<br>②NO BREAKAGE, CRACK OR LOOSENESS ON COMPONENTS |                          |                           | ○                      | -        |
| VIBRATION  |                             | 3 HOURS AT AN AMPLITUDE OF 1.5mm WITH THE FREQUENCY RANGE 10~55Hz IN EACH OF THREE MUTUALLY PERPENDICULAR PLANE                      |                            |                            |  |                          |                           | ○                      | -        |
| FLEX TEST  |                             | 8.82N LOAD, 100 CYCLES △<br>TELCORDIA GR-910-CORE  |                            |                            |  |                          |                           | ○                      | -        |
| TWIST TEST   |                             | 13.23N LOAD, 10 CYCLES △<br>TELCORDIA GR-910-CORE  |                            |                            |  |                          |                           | ○                      | -        |
| SIDE PULL  |                             | 12.25N LOAD, 90° ANGLE, ACTIVE<br>TELCORDIA GR-910-CORE △  |                            |                            |  |                          |                           | ○                      | -        |
| IMPACT TEST  |                             | 3 TIMES IN EACH OF THREE MUTUALLY PERPENDICULAR AXIS WITH THE ACCELERATION 981m/s <sup>2</sup> .                                     |                            |                            | ○  | -                        |                           |                        |          |
| <b>ENVIRONMENTAL CHARACTERISTICS</b>                           |                             |  |                            |                            |  |                          |                           |                        |          |
| COMPOSITE TEMPERATURE -HUMIDITY CYCLIC TEST                    |                             | HUMIDITY:90~96%<br>TEMPERATURE:-10~65°C<br>TIME:480 HOURS (20 CYCLES)  |                            |                            | ①ATTENUATION AND RETURN LOSS SHALL BE SATISFIED BEFORE AND AFTER THE TEST.<br>②NO BREAKAGE, CRACK OR LOOSENESS ON COMPONENTS |                          |                           | ○                      | -        |
| CHANGE OF TEMPERATURE  |                             | TEMP. :-40→-40→80→80→80~-40°C<br>TIME : 60→ 180 →60→ 180min<br>CYCLES:100 CYCLES   |                            |                            |  |                          |                           | ○                      | -        |
| DRY HEAT-HIGH TEMPERATURE ENDURANCE                            |                             | TEMPERATURE:85°C , TIME:500 HOURS  |                            |                            |  |                          |                           | ○                      | -        |
| COLD   |                             | TEMPERATURE:-40°C , TIME:500 HOURS   |                            |                            |  |                          |                           | ○                      | -        |
| SALT MIST  |                             | SALT MIST:5%, TIME:48 HOURS  |                            |                            |  |                          |                           | ○                      | -        |
| REMARKS  |                             |  |                            |                            | NO CORROSION   |                          |                           |                        |          |
|  |                             |  |                            |                            | DRAWN  | DESIGNED                 | CHECKED                   | APPROVED               | RELEASED |
|  |                             |  |                            |                            | T. YOSHIDA<br>01, 10, 9  | T. YOSHIDA<br>01, 10, 9  | Y. MIYAKE<br>01, 10, 9    | Y. MIYAKE<br>01, 10, 9 |          |
| Note QT:Qualification Test AT:Assurance Test ○:Applicable Test |                             |  |                            |                            |  |                          |                           |                        |          |
| <b>HRS</b> HIROSE ELECTRIC CO., LTD.                           |                             |  |                            | <b>SPECIFICATION SHEET</b> |  |                          | PART NO.<br>HSC-AT11K-A** |                        |          |
| CODE NO. (OLD)   |                             |  | DRAWING NO.<br>ELC4-140867 |                            |  | CODE NO.<br>CL820        |                           | 1/1                    |          |

