

NOTES:

- EACH FIBER WILL BE MARKED IN BLACK ACCORDING TO ITS PORT ID.
 - SHORT MARK, APPROXIMATELY 5.0 mm LONG, REPRESENTS AS '1'.
 - LONG MARK, APPROXIMATELY 10.0 mm LONG, REPRESENTS AS '5'.
 FOR EXAMPLE; GROUP OF TWO SHORT MARKS REPRESENTS PORT ID NUMBER '2',
 GROUP OF ONE LONG MARK AND THREE SHORT MARKS REPRESENTS PORT ID NUMBER '8'.
 THE FIBER MARKING IS APPLYING TO BOTH INPUTS AND OUTPUTS.
- UNLESS OTHERWISE SPECIFIED, COUPLER MARKING TO BE LABELED WITH 'CANSTAR', CANSTAR PART DESCRIPTOR, AND SERIAL NUMBER.
- COUPLER CONFIGURATION AVAILABLE FROM 1 X 3 UP TO 32 X 32.
- SEE SHEET 2 FOR PART NUMBER ORDERING INFORMATION,.
- SEE SHEET 3 FOR CANSTAR PART DESCRIPTORS.
- SEE SHEET 4 & 5, TABLE A-1 & A-2 FOR OPTICAL PERFORMANCE SPECIFICATIONS. THE TABLES SHOW REPRESENTATIVE SUBSETS OF AVAILABLE CONFIGURATIONS. PLEASE CONTACT THE MANUFACTURER FOR CONFIGURATIONS THAT ARE NOT LISTED IN THE TABLE.
- SEE SHEET 5, TABLE B, FOR CONNECTORIZED COUPLER SPECIFICATIONS.
- CONTACT US FOR COUPLERS WITH CUSTOMER SPECIALTY FIBERS, OR WITH CUSTOMER SPECS.

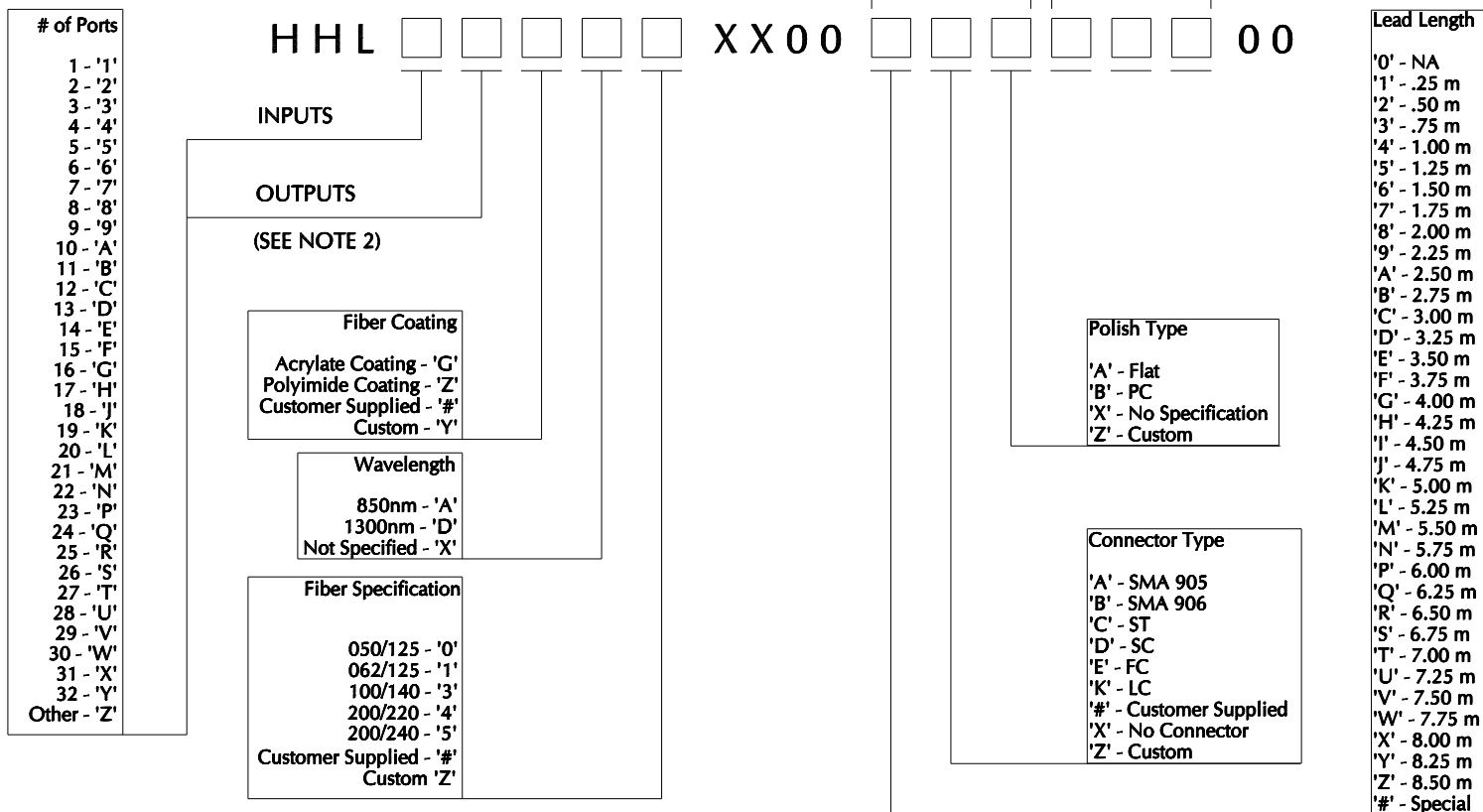
| STANDARD SPECIFICATION | |
|------------------------|--|
| COUPLING | TESTED UNDER FULLY FILLED LAUNCH CONDITIONS |
| WAVELENGTH | 600nm TO 1600nm, TESTED @ 850nm OR 1300nm AS SPECIFIED |
| DIRECTIVITY | > = 40dB @ 850nm (APPLICABLE TO ASYMMETRIC CONFIGURATION ONLY) |
| THERMAL STABILITY | < = 0.002dB/1° C OVER -40° C TO +85° C (NON-CONNECTORIZED) |
| LEAD TYPE | 0.9 mm PTFE LOOSE TUBE |
| PACKAGING STYLE | RUGGEDIZED PLASTIC HOUSING |

| | | | | | | | | | | | |
|---------------|--------|------|-----------|-------------|----------------|------------------------|-----------|----------------|-------|-------|--|
| spec ref | dr | | asir | 2012/06/14 | projection | MM [INCH] | size | A4 | scale | 0.750 | |
| tolerance std | eng | | asir | 2012/07/04 | | | ecn no | ELX-S-012108-1 | | | |
| | chr | | - | - | | | rel level | Released | | | |
| surface | appr | | John Wang | 2012/07/04 | product family | | dwg no | HHL-MXN01 | | rev | |
| | linear | 0.X | ±0.3 | www.fci.com | cat. no. | Product - Customer Drw | | sheet 1 of 6 | B | | |
| | | 0.XX | ±0.05 | | | | | | | | |
| angular | 0° | ±2° | | | | | | | | | |



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PART NUMBER ORDERING INFORMATION



NOTES:

1. ORDERING OPTIONS OF LEAD LENGTH FOR OUTPUTS ARE IDENTICAL TO INPUTS.
2. ORDERING OPTIONS OF CHANNEL CONFIGURATION FOR INPUTS AND OUTPUTS ARE IDENTICAL.
3. NOMINAL LEAD LENGTH: 0.55 m

| | | | | | | | | | | | | | |
|---------------------------------------|---------|-------|-------|------------|----------------|--------------|--|----------------|-------|--------------|-----------|-----|---|
| spec ref | | dr | asir | 2012/06/14 | projection | MM [INCH] | size | A4 | scale | N/A | | | |
| tolerance std | | eng | asir | 2012/07/04 | | | ecn no | ELX-S-012108-1 | | | | | |
| TOLERANCES UNLESS OTHERWISE SPECIFIED | | chr | - | - | | | rel level | Released | | | | | |
| surface | linear | 0.X | ±0.3 | | FCI | title | COUPLER, STAR, MULTIMODE 'HL' PACKAGE | | | dwg no | HHL-MXN01 | rev | B |
| | | 0.XX | ±0.05 | | | | | | | | | | |
| | | 0.XXX | ± | | | | | | | | | | |
| | angular | 0° | ±2° | | www.fci.com | cat. no. | Product - Customer Drw | | | sheet 2 of 6 | | | |



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CANSTAR PART DESCRIPTOR

HHL - X - / - XX

of Inputs
 One - '01'
 Two - '02'
 .
 .
 .
 Thirty Two - '32'

of Outputs
 One - '01'
 Two - '02'
 .
 .
 .
 Thirty Two - '32'

Core Diameter
 50um - '050'
 62.5um - '062'
 100um - '100'
 200um - '200'

Cladding Diameter (um)
 125 um - '125'
 140 um - '140'
 220 um - '220'
 240 um - '240'

Tested Wavelength
 850nm (Default) - 'NONE'
 1300nm - 'D'



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| | | | | | | | | | |
|---------------|---------------------------------------|---------------------------|--|---|---------------------|------------------------|-----------|-----------------------|--|
| spec ref | | dr asir 2012/06/14 | | projection | MM [INCH] | size A4 | scale N/A | | |
| tolerance std | TOLERANCES UNLESS OTHERWISE SPECIFIED | | | | | eng asir 2012/07/04 | ← → | ecn no ELX-S-012108-1 | |
| | | | | | | chr - - | | rel level Released | |
| surface ✓ | | appr John Wang 2012/07/04 | | product family | | rev B | | | |
| linear | 0.X | ±0.3 | | title COUPLER, STAR, MULTIMODE 'HL' PACKAGE | dwg no HHL-MXN01 | sheet 3 of 6 | | | |
| | 0.XX | ±0.05 | | | | | | | |
| | 0.XXX | ± | | | | | | | |
| angular | 0° | ±2° | | www.fci.com | cat. no. | Product - Customer Drw | | | |

| TABLE A-1 | | | | |
|----------------------|-----------------|--------------------|-----------------------------|--------------------------|
| PART DESCRIPTOR | WAVELENGTH (nm) | COUPLING RATIO (%) | MAXIMUM INSERTION LOSS (dB) | MAXIMUM LOSS SPREAD (dB) |
| HHL-01X03-050/125-XX | 850 | 33.3 | 5.8 | 0.8 |
| HHL-03X03-050/125-XX | 850 | 33.3 | 5.8 | 0.8 |
| HHL-01X04-050/125-XX | 850 | 25.0 | 7.5 | 1.0 |
| HHL-02X04-050/125-XX | 850 | 25.0 | 7.5 | 1.0 |
| HHL-04X04-050/125-XX | 850 | 25.0 | 7.5 | 1.0 |
| HHL-01X06-050/125-XX | 850 | 16.6 | 9.0 | 1.0 |
| HHL-06X06-050/125-XX | 850 | 16.6 | 9.0 | 1.0 |
| HHL-01X08-050/125-XX | 850 | 12.5 | 11.0 | 1.5 |
| HHL-04X08-050/125-XX | 850 | 12.5 | 11.0 | 1.5 |
| HHL-08X08-050/125-XX | 850 | 12.5 | 11.0 | 1.5 |
| HHL-01X12-050/125-XX | 850 | 8.3 | 12.5 | 2.0 |
| HHL-12X12-050/125-XX | 850 | 8.3 | 12.5 | 2.0 |
| HHL-01X16-050/125-XX | 850 | 6.3 | 14.5 | 2.0 |
| HHL-16X16-050/125-XX | 850 | 6.3 | 14.5 | 2.0 |
| HHL-01X20-050/125-XX | 850 | 5.0 | 15.5 | 2.0 |
| HHL-20X20-050/125-XX | 850 | 5.0 | 15.5 | 2.0 |
| HHL-01X32-050/125-XX | 850 | 3.1 | 17.5 | 2.0 |
| HHL-32X32-050/125-XX | 850 | 3.1 | 17.5 | 2.0 |
| HHL-01X03-062/125-XX | 850 | 33.3 | 5.8 | 0.8 |
| HHL-03X03-062/125-XX | 850 | 33.3 | 5.8 | 0.8 |
| HHL-01X04-062/125-XX | 850 | 25.0 | 7.5 | 1.0 |
| HHL-02X04-062/125-XX | 850 | 25.0 | 7.5 | 1.0 |
| HHL-04X04-062/125-XX | 850 | 25.0 | 7.5 | 1.0 |
| HHL-01X06-062/125-XX | 850 | 16.6 | 9.0 | 1.0 |
| HHL-06X06-062/125-XX | 850 | 16.6 | 9.0 | 1.0 |
| HHL-01X08-062/125-XX | 850 | 12.5 | 11.0 | 1.5 |
| HHL-04X08-062/125-XX | 850 | 12.5 | 11.0 | 1.5 |
| HHL-08X08-062/125-XX | 850 | 12.5 | 11.0 | 1.5 |
| HHL-01X12-062/125-XX | 850 | 8.3 | 12.5 | 2.0 |
| HHL-12X12-062/125-XX | 850 | 8.3 | 12.5 | 2.0 |
| HHL-01X16-062/125-XX | 850 | 6.3 | 14.5 | 2.0 |
| HHL-16X16-062/125-XX | 850 | 6.3 | 14.5 | 2.0 |
| HHL-01X20-062/125-XX | 850 | 5.0 | 15.5 | 2.0 |
| HHL-20X20-062/125-XX | 850 | 5.0 | 15.5 | 2.0 |
| HHL-01X32-062/125-XX | 850 | 3.1 | 17.5 | 2.0 |
| HHL-32X32-062/125-XX | 850 | 3.1 | 17.5 | 2.0 |



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| | | | | | | | | | | | | |
|---------------|---------------------------------------|-----------|------------|----------------|----------------|--------------|--------|---------------------------------------|----------|-------------|----------|------------------------|
| spec ref | | dr | asir | 2012/06/14 | projection | MM [INCH] | size | A4 | scale | N/A | | |
| tolerance std | TOLERANCES UNLESS OTHERWISE SPECIFIED | eng | asir | 2012/07/04 | | | ecn no | ELX-S-012108-1 | | | | |
| | | chr | - | - | | | | rel level | Released | | | |
| appr | | John Wang | 2012/07/04 | product family | | HHL-MXN01 | rev | | B | | | |
| surface | | linear | 0.X | ±0.3 | FCI | | title | COUPLER, STAR, MULTIMODE 'HL' PACKAGE | | www.fci.com | cat. no. | Product - Customer Drw |
| | 0.XX | | ±0.05 | | | | | | | | | |
| | 0.XXX | | ± | | | | | | | | | |
| angular | 0° | ±2° | dwg no | | HHL-MXN01 | | | | | | | |

| TABLE A-2 | | | | |
|----------------------|-----------------|--------------------|-----------------------------|--------------------------|
| PART DESCRIPTOR | WAVELENGTH (nm) | COUPLING RATIO (%) | MAXIMUM INSERTION LOSS (dB) | MAXIMUM LOSS SPREAD (dB) |
| HHL-01X03-100/140-XX | 850 | 33.3 | 5.8 | 0.8 |
| HHL-03X03-100/140-XX | 850 | 33.3 | 5.8 | 0.8 |
| HHL-01X04-100/140-XX | 850 | 25.0 | 7.5 | 1.0 |
| HHL-02X04-100/140-XX | 850 | 25.0 | 7.5 | 1.0 |
| HHL-04X04-100/140-XX | 850 | 25.0 | 7.5 | 1.0 |
| HHL-01X06-100/140-XX | 850 | 16.6 | 9.0 | 1.0 |
| HHL-06X06-100/140-XX | 850 | 16.6 | 9.0 | 1.0 |
| HHL-01X08-100/140-XX | 850 | 12.5 | 11.0 | 1.5 |
| HHL-04X08-100/140-XX | 850 | 12.5 | 11.0 | 1.5 |
| HHL-08X08-100/140-XX | 850 | 12.5 | 11.0 | 1.5 |
| HHL-01X12-100/140-XX | 850 | 8.3 | 12.5 | 2.0 |
| HHL-12X12-100/140-XX | 850 | 8.3 | 12.5 | 2.0 |
| HHL-01X16-100/140-XX | 850 | 6.3 | 14.5 | 2.0 |
| HHL-16X16-100/140-XX | 850 | 6.3 | 14.5 | 2.0 |
| HHL-01X20-100/140-XX | 850 | 5.0 | 15.5 | 2.0 |
| HHL-20X20-100/140-XX | 850 | 5.0 | 15.5 | 2.0 |
| HHL-01X32-100/140-XX | 850 | 3.1 | 17.5 | 2.0 |
| HHL-32X32-100/140-XX | 850 | 3.1 | 17.5 | 2.0 |
| HHL-01X03-200/220-XX | 850 | 33.3 | 6.6 | 1.2 |
| HHL-03X03-200/220-XX | 850 | 33.3 | 6.6 | 1.2 |
| HHL-01X04-200/220-XX | 850 | 25.0 | 8.0 | 1.5 |
| HHL-02X04-200/220-XX | 850 | 25.0 | 8.0 | 1.5 |
| HHL-04X04-200/220-XX | 850 | 25.0 | 8.0 | 1.5 |
| HHL-01X06-200/220-XX | 850 | 16.6 | 10.0 | 1.5 |
| HHL-06X06-200/220-XX | 850 | 16.6 | 10.0 | 1.5 |
| HHL-01X08-200/220-XX | 850 | 12.5 | 12.1 | 2.3 |
| HHL-04X08-200/220-XX | 850 | 12.5 | 12.1 | 2.3 |
| HHL-08X08-200/220-XX | 850 | 12.5 | 12.1 | 2.3 |
| HHL-01X12-200/220-XX | 850 | 8.3 | 14.2 | 3.0 |
| HHL-12X12-200/220-XX | 850 | 8.3 | 14.2 | 3.0 |
| HHL-01X16-200/220-XX | 850 | 6.3 | 15.7 | 3.0 |
| HHL-16X16-200/220-XX | 850 | 6.3 | 15.7 | 3.0 |
| HHL-01X20-200/220-XX | 850 | 5.0 | 16.7 | 3.0 |
| HHL-20X20-200/220-XX | 850 | 5.0 | 16.7 | 3.0 |
| HHL-01X32-200/220-XX | 850 | 3.1 | 18.7 | 3.0 |
| HHL-32X32-200/220-XX | 850 | 3.1 | 18.7 | 3.0 |

| | | | | | | | | | | | | | | | | | | | | | | | |
|--|-------|---|--|----------------|-----|------------------|--|---------------------------|-------|--|-------|---|---------|----|-----|--|--|--|--|-------------------------------|--|--------------|--|
| spec ref | | dr asir 2012/06/14 | | projection | | size A4 | | scale N/A | | | | | | | | | | | | | | | |
| tolerance std | | eng asir 2012/07/04 | | | | | | ecn no ELX-S-012108-1 | | | | | | | | | | | | | | | |
| TOLERANCES UNLESS OTHERWISE SPECIFIED | | chr - | | | | | | rel level Released | | | | | | | | | | | | | | | |
| | | appr John Wang 2012/07/04 | | product family | | dwg no HHL-MXN01 | | rev B | | | | | | | | | | | | | | | |
| surface | | <table border="1"> <tr><td>linear</td><td>0.X</td><td>±0.3</td></tr> <tr><td></td><td>0.XX</td><td>±0.05</td></tr> <tr><td></td><td>0.XXX</td><td>±</td></tr> <tr><td>angular</td><td>0°</td><td>±2°</td></tr> </table> | | linear | 0.X | ±0.3 | | 0.XX | ±0.05 | | 0.XXX | ± | angular | 0° | ±2° | | | title COUPLER, STAR, MULTIMODE 'HL' PACKAGE | | Product - Customer Drw | | sheet 5 of 6 | |
| linear | 0.X | ±0.3 | | | | | | | | | | | | | | | | | | | | | |
| | 0.XX | ±0.05 | | | | | | | | | | | | | | | | | | | | | |
| | 0.XXX | ± | | | | | | | | | | | | | | | | | | | | | |
| angular | 0° | ±2° | | | | | | | | | | | | | | | | | | | | | |
| | | www.fci.com | | cat. no. | | | | | | | | | | | | | | | | | | | |



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| TABLE B | | | |
|----------------|-------------|---------------------------------|---|
| CONNECTOR TYPE | POLISH TYPE | INSERTION LOSS / CONNECTOR (dB) | BACK REFLECTION (dB) |
| ST | FLAT | < = 0.5 | Not Specified |
| | PC | < = 0.35 | Please contact manufacturer for details |
| FC | FLAT | < = 0.5 | Not Specified |
| | PC | < = 0.35 | Please contact manufacturer for details |
| SC | FLAT | < = 0.5 | Not Specified |
| | PC | < = 0.35 | Please contact manufacturer for details |
| LC | FLAT | < = 0.5 | Not Specified |
| | PC | < = 0.35 | Please contact manufacturer for details |
| SMA 905 | FLAT | < = 1.0 | Not Specified |
| SMA 906 | FLAT | < = 1.0 | Not Specified |

NOTES:

- PLEASE REFER TO COUPLER SPECIFICATION FOR INSERTION LOSS VALUES, AND ADD CONNECTOR INSERTION LOSS FROM TABLE.
- LEAD LENGTH TOLERANCE: +10cm / -0cm OF NOMINAL LENGTH.
- TEMPERATURE RANGE: -20° C TO +70° C

| | | | | | | | |
|---------------|---------------------------------------|---------------------------|-------|----------------|---|------------------------|-----------------------|
| spec ref | | dr asir 2012/06/14 | | projection | MM [INCH] | size A4 | scale N/A |
| tolerance std | TOLERANCES UNLESS OTHERWISE SPECIFIED | | | | | eng asir 2012/07/04 | ecn no ELX-S-012108-1 |
| | | | | | | | |
| | | appr John Wang 2012/07/04 | | product family | | rel level Released | |
| surface | linear | 0.X | ±0.3 | | title COUPLER, STAR, MULTIMODE 'HL' PACKAGE | dwg no HHL-MXN01 | rev B |
| | | 0.XX | ±0.05 | | | | |
| | | 0.XXX | ± | | | | |
| | angular | 0° | ±2° | www.fci.com | cat. no. | Product - Customer Drw | sheet 6 of 6 |



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