

GHMT PVP Testplan-LWL Ed. 2.0 (summary)

Fibre Optic Interconnecting Devices and Passive Components –
Terminated Cable Assemblies and Mating Adapters



| Performance Requirements | | | | |
|------------------------------------------------------------------------------------------------------------|------------------------------------|-------------------------|-------------------------|-------------------------|
| Optical Parameters | | | | |
| | Ferrule | Level 1 | Level 2 | Level 3 |
| Max. Attenuation* | PC / APC | $\leq 0,15$ dB | $\leq 0,25$ dB | $\leq 0,50$ dB |
| Min. Return Loss** (SM only) | PC | ≥ 50 dB | ≥ 45 dB | - |
| | APC | ≥ 80 dB | ≥ 60 dB | - |
| *according IEC 61300-3-4 (setup with reference connector – method B; limit for 100% of plugs) | | | | |
| **according IEC 61300-3-6 | | | | |
| Geometric Parameters (Ferrule Endface) | | | | |
| | | Level 1 | Level 2 | Level 3 |
| APEX Offset | Mounted Housing | ≤ 70 μ m | ≤ 70 μ m | ≤ 70 μ m |
| Fibre Height (Spherical Fit) | Min. (undercut) | Calc. acc. IEC | Calc. acc. IEC | Calc. acc. IEC |
| | Max. | 100 nm | 100 nm | 100 nm |
| Radius of Curvature | 2,5 mm Ferrule PC | 10-25 mm | 5-30 mm | 5-30 mm |
| | 2,5 mm Ferrule APC | 5-12 mm | 5-12 mm | 5-12 mm |
| | 1,25 mm Ferrule PC | 7-25 mm | 5-30 mm | 5-30 mm |
| | 1,25 mm Ferrule APC | 5-12 mm | 5-12 mm | 5-12 mm |
| Roughness | Fibre Roughness | 0-50 nm | 0-50 nm | 0-50 nm |
| | Ferrule Roughness | 0-50 nm | 0-50 nm | 0-50 nm |
| Angle (APC) | | $8^\circ \pm 0,3^\circ$ | $8^\circ \pm 0,5^\circ$ | $8^\circ \pm 0,5^\circ$ |
| Mating Cycle Test (Fibre Optic Mating Adapters) | | | | |
| | ΔIL Max.: | $\leq 0,20$ dB | | |
| Remark: | | | | |
| The tested component has to PASS the limits before and after the change of temperature test. | | | | |

| Test Conditions | | | |
|-----------------------------------------------------------|---------------------------|---------|--|
| Change of Temperature Test [IEC 61300-2-22 Cat. C] | | | |
| Test Procedure: | Number of Cycles: | 5 | |
| | Min. Temperature: | -10 °C | |
| | Max. Temperature: | +60 °C | |
| | Humidity: | - | |
| | Rate of Change: | 1 K/min | |
| | Time of Exposure: | 60 min. | |
| Mating Cycle Test (Fibre Optic Coupler) | | | |
| Test Procedure: | Number of Matings: | 3 x 50 | |