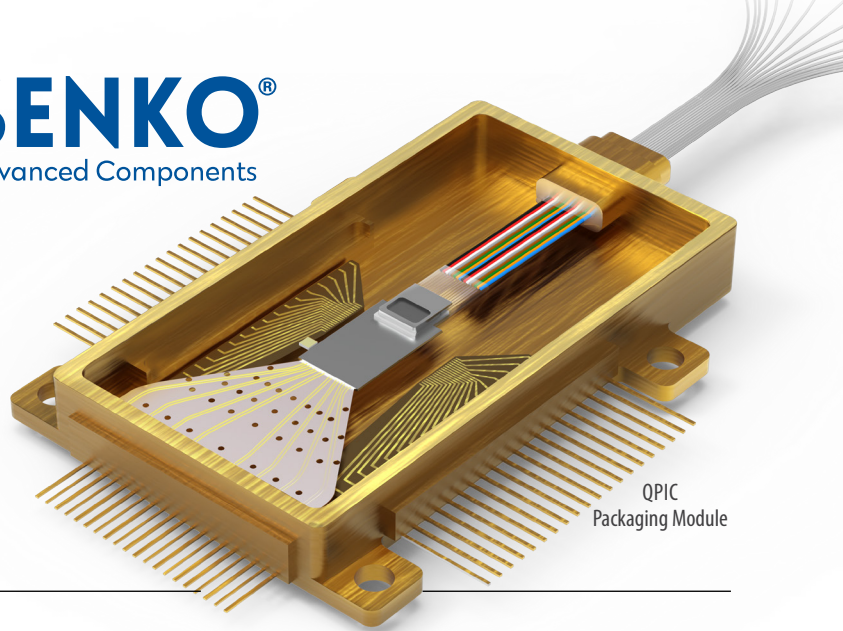


QPIC PACKAGING MODULE QPICPAC Developed



The QPICPAC multi-fibre Photonic Integrated Circuit (PIC) module is a standardized, hermetic, short lead time, cost effective, packaging solution with up to 8 fibres which can be used for both standard PICs or Quantum PICs (QPICs). It is ideal for early PIC industrial trial and evaluation testing, full system testing, in addition to production volumes. These (Q)PIC packages are assembled using Alter Technology UK's advanced techniques that employ high reliability telecoms manufacturing processes to minimize size and maximize stability and reliability.

SENKO supplies low-loss cable assemblies to Alter for the (Q)PIC packages. Cables incorporate single-mode optical fibre that is terminated at the (Q)PIC with SENKO's Metallic PIC Connector (MPC) using CudoForm™ high-precision metal stamping. The cable is connectorized outside the hermetic package with SENKO's low-loss MPO connectors or fanout to FC/APC connectors. SENKO's CudoForm™ MPC assemblies have been employed during the testing and development of the design template and offer advantages over traditional fibre arrays.

Options include up to 8 fibres using single-mode fibre or ribbon along with a wide choice of single or multi-channel optical connectors. Process Design Kits (PDKs) are available from SENKO or Alter for planning the QPICs compatibility with an MPC.

FEATURES

- Hermetically sealed for high reliability applications with up to 8 channels using single or ribbon fiber(s)
- Integrated TEC and temperature sensor for precision control in harsh environments
- Manufactured using high reliability telecoms process
- Ultra low loss
- Templates available to simplify deployment
- Compatible with most (Q)PIC designs
- Use of SENKO's CudoForm™ MPC technology
- Short leadtime in industrial packages for in-situ application testing a multi-channel PIC

APPLICATIONS

- Automotive LIDAR
- Telecoms
- Space
- Quantum technology
- PIC test and validation

KEY BENEFITS

- ✓ **Turn-key (Q)PIC solution**
- ✓ **Support from industry leaders**
- ✓ **Low, medium and high production runs**

Specification

	Value
Wavelength	C-band (1530 – 1565 nm), C-band-100 (1500 – 1600 nm)
Typical 3 dB Bandwidth	C-band (60 nm), C-band-100 (>100 nm)
Fibre Connects	Up to 8 fibres
Channel Pitch	250 µm standard (≤ 8 CH SENKO CudoForm™ FVA)
Fibre Type	SM (ribbon or singulated, connector dependent)
Optical Connectivity	SENKO CudoForm™ MPC (Metallic Pic Connector), or SENKO regular FVA
Fibre Lengths	1000 mm typically
Connector	FC/APC or MPO typically (others on request – SC, LC etc.)
PIC Coupling	High performance grating couplers C-band or C-band-100
Insertion Loss	< 3 dB (C-band), < -4.5 dB (C-band-100) (device and design dependant)
RF	Up to 30 GHz – 8x signal pins available (4x GSGSG pin array)
Temperature Control	TEC * and 10K thermistor built in
TEC Power	5.2 W (single TEC)*
Drive Current	< 5 Amps*
Operating Temperature Range	-5 °C to +65 °C typical

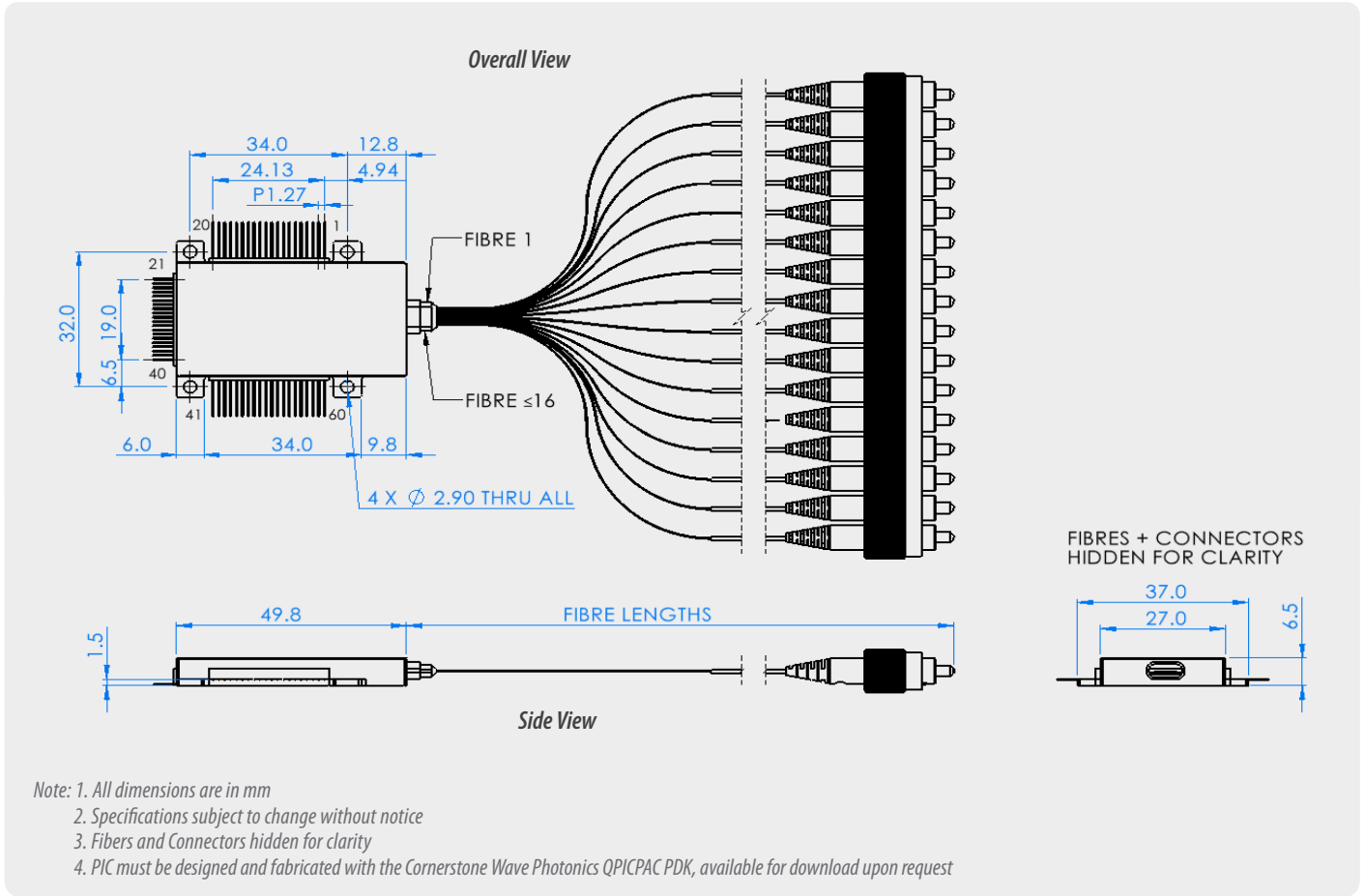
* The IP rating was validated using a SENKO sourced cable and termination procedure. It is recommended to retest IP rating for any other cable types.

QPIC PACKAGING MODULE

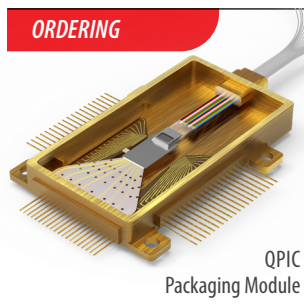
QPICPAC developed

QPICPAC DATA SHEET

QPICPAC Example Configuration



Innovation through Collaboration



ORDERING	TYPE
	QPICPAC

Note: The (Q)PIC must be designed and fabricated with the Cornerstone – Wave Photonics QPICPAC PDK, available for download on request.

Contact QPICPAC@Senko.com for availability and to learn more

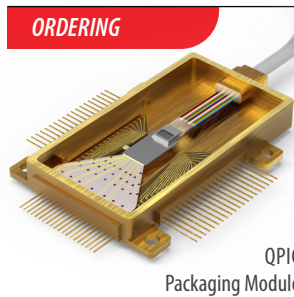
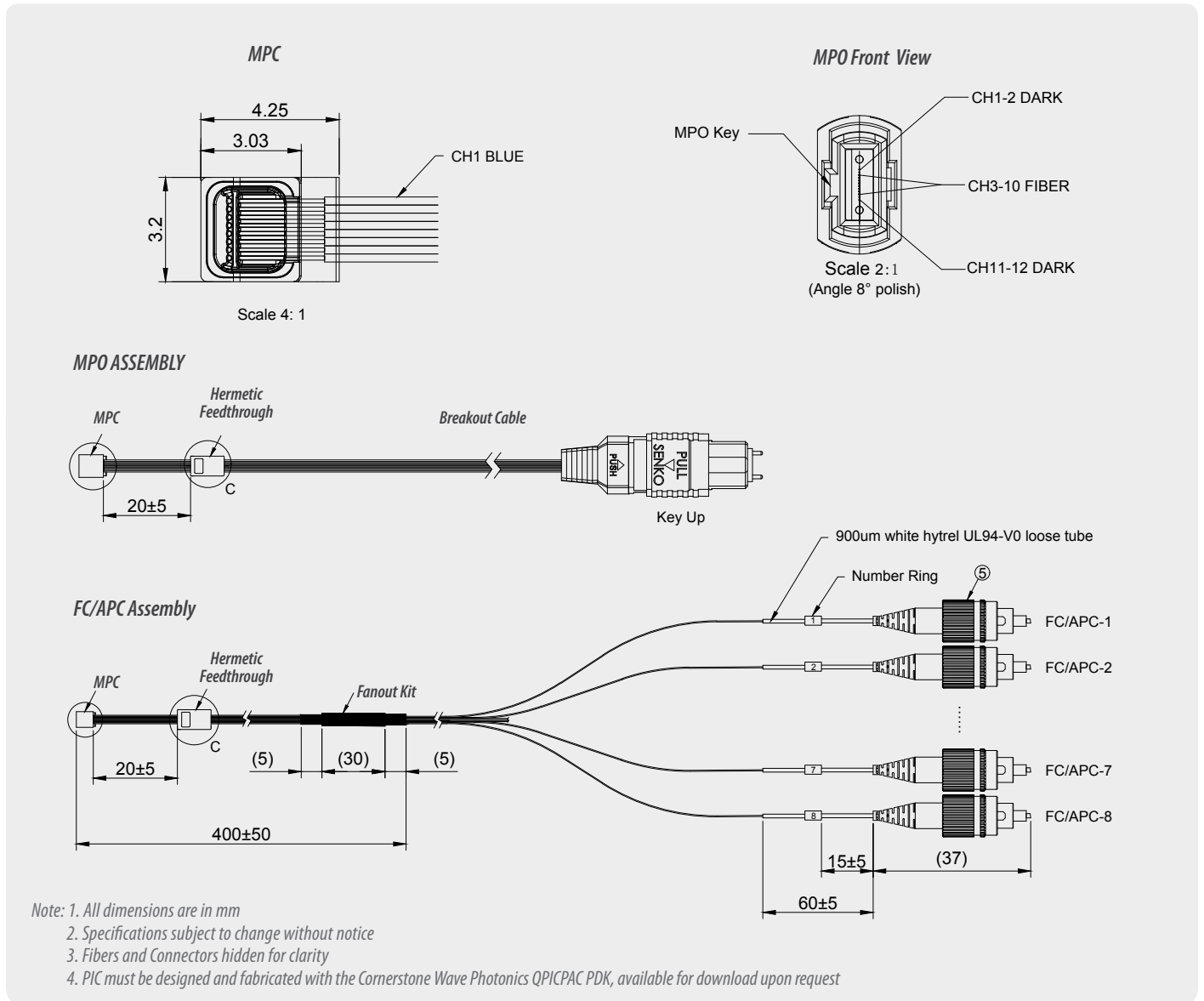


QPIC PACKAGING MODULE

QPICPAC developed

QPICPAC DATA SHEET

QPICPAC MPC Connectivity Options



TYPE
QPICPAC

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