

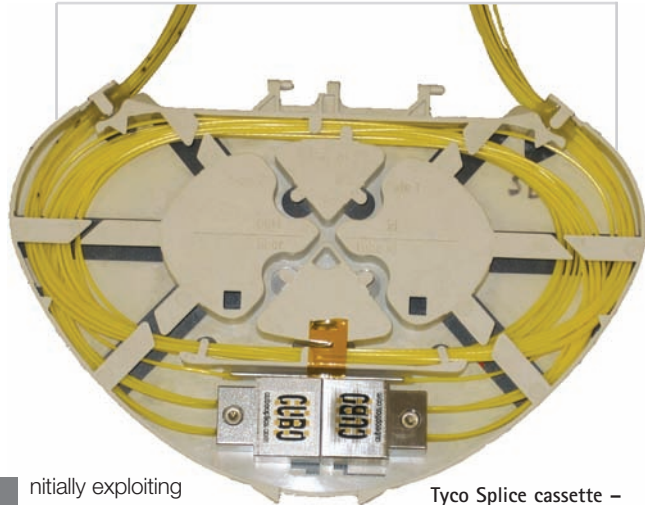
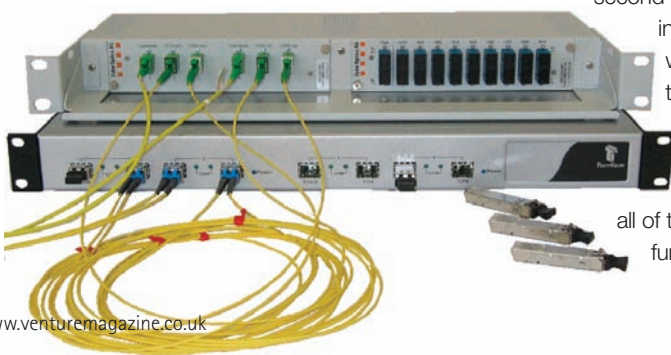
Fibre class

Using proprietary technologies, **Cube Optics** offers compact, robust, high performance fibre optic components, integrated modules and systems



Two versions of "colour cube's" integrated into a product from our partner LastMile. This shows how products integrate easily into existing optical transport gear

A product for carrier class Central Office installation. "cube's" are buried in the metal cabinets along with other optical components and electronic components. The connectors are linking cables going to the main transport lines or to other equipment



Initially exploiting proprietary packing of optical sub-elements on a microscopic scale in 2000, Germany-based Cube Optics (CUBO) began life supplying low cost Coarse Wavelength Division Multiplex (CWDM) components and other types of passive optical networking to OEM equipment manufacturers. Integrating a uniquely small, high performance and robust optical polymer bench architecture, the company's products are in compact subassemblies and plug-and-play modules that are installed with many of Europe's telecom carriers and new network providers.

The product range extends from components that are used by OEMs, through to custom designs that are embedded into subassemblies and complete stand-alone systems installed with carrier-class network operators, with the main applications devoted to passive optical networking. Describing the main business areas, CEO Francis Nedvidek begins: "There are two basic lines, one is the carriers, such as Telefonica and Arcor, who are looking to increase their capacity without laying more fibre, and the second is the OEM business, including Multilink and ADC, who also supply equipment to these carriers."

The unique benefit of CUBO's microinjection moulding technology is that all of the significant structural and functional features, the related

Tyco Splice cassette – small enough to retrofit into existing infrastructure to upgrade the data carrying capacity of the installed optical fibres

passive alignment indexes, and manufacturing and test process guides are created during forming, while the final packages, which comprise various optical building-block-like elements assembled into sub-elements, are the smallest Telcordia qualified components of their kind. These exceedingly adaptable optical building blocks enable creative and cost effective solutions for data communications, telecommunications, industrial sensors and medicine, with the innovation offering a very small footprint, simple interfacing and reliability against environmental stress.

Using CWDM to increase the bandwidth of optical access networks, instead of installing additional fibre, has become the preferred method within the industry, with passive CWDM costing far less. CUBO's products also offer enhanced levels of flexibility in terms of network planning and installation, which preserves scalability to handle far higher data transmission volumes as bandwidth expands. Requiring no electrical power the operating cost is lower, while the open standards, flexibility and simplicity of deployment have also attracted many customers to use the solutions.

CUBO has a strong emphasis on ensuring the quality of its service, with its products conforming to Telcordia

standards. "The market demands what the minimum specifications of the products have to be, and we test at every stage of the production process internally, before sending them to the customers who perform very complicated qualification systems over several months."

By working particularly closely with its customers, CUBO integrates its own components with components and accessories from other vendors into modules for OEM clients and higher-level stand-alone systems for carriers and network operators. Highlighting one particularly successful relationship, Francis says: "At the start of 2005, Telefonica Germany wanted to increase the capacity of their fibre, and were looking to upgrade 4000 rings. Working with their engineers, we illustrated that using our optical components they could save a lot of money on the upgrade, and as a result they designed their improvement around what we could offer. Delivering the first sample in August 2005, we have been shipping ever since, and now nearing the end of this project, it has been worth well over one million euros to us."

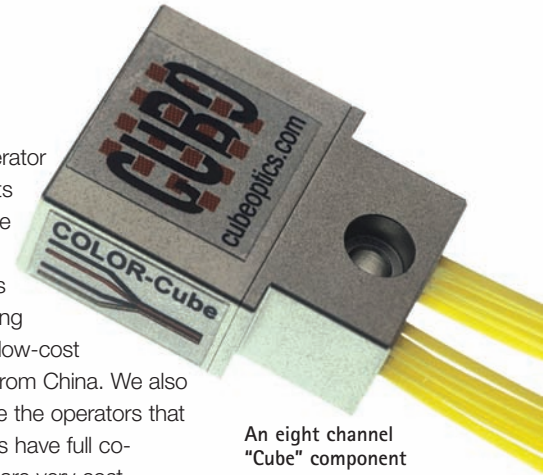
Discussing the growth the company has witnessed while fulfilling this contract, Francis continues: "We have been doubling our sales each year, with 1.5 million euros in 2005, raising to 3.4 million euros in 2006, and we are currently on track to reach six million euros for this year. There is a lot of opportunity

for us to gain more customers in Asia, while we are also witnessing a lot of activity in Poland, France, Ireland, Italy, Spain and Slovenia. To maintain this growth we have been adding shifts and hiring operators, as we look to increase the utilisation of our infrastructure."

Growing demand

With a number of new operators in the market, following the deregulation of the telecom industry, there is a growing demand for CUBO's services. Describing the challenges this brings, Francis comments: "It is a very turbulent market, with a wide selection of choice for the end user; for example cable, telephone, incumbent and new start-up operators can all provide an internet service. There is also a lot of choice


on how the operator wants to build its network, and we have to be cost-effective as we are competing against a lot of low-cost manufacturing from China. We also need to educate the operators that our components have full co-operability, and are very cost-effective, flexible and miniature, while those coming from China tend to require their own separate boxes." Summarising the hopes for the future, Francis concludes: "We are a growing company with unique performance capabilities, and will continue to look at expanding our service areas, as we achieve higher turnover and better margins." ■



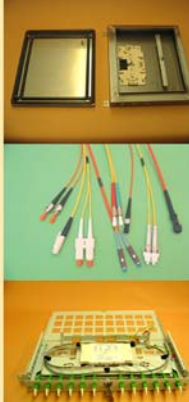



An eight channel "Cube" component

LWL-Sachsenkabel

During the last 16 years LWL-Sachsenkabel GmbH has developed into an acknowledged manufacturer of fibre optic components and system technics. LWL-Sachsenkabel GmbH is a certified manufacturer of the Deutsche Telekom AG. Since 2002 it has had very fertile business relations with Cube Optics AG, which include assembling passive optic components and a qualification by its Optical Spectrum Analyzer (OSA). Furthermore, it collaborates on product development and supports larger projects.



LWL Sachsenkabel GmbH
Your Partner for Assembly of fibre optic Cable and System Technics

<p>About us we are a certified manufacturer of fibre optic components and system technics.</p> <p>Services</p> <ul style="list-style-type: none"> • Individual consulting and training • Repair of defective cables & measuring boxes 	<p>Our Products</p> <ul style="list-style-type: none"> • Fibre Optic Cables • Connectors & Adaptors • Patchcords & Pigtails • HCS & POF • Preassembled Bundle Core Cable • Connecting and Distributing Engineering • Special Assemblies • Special Components for PON 	
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