

## Specialist Fibre Optic Cables - cost v quality

### Background

To source industry approved fibre optic cable that would not only meet the stringent industry standards but would also prove a reliable, consistent solution that could meet their technical requirements whilst being cost effective.

Our customer, a manufacturer of medical grade optical instruments, came to us with a technically challenging requirement where they were having specific problems in getting a supply that was consistent quality at a price that met their expectations.

The product that they required was a fibre optic cable for use with lasers across a specific range of wavelengths and an additional requirement for the fibres to have a high quality anti reflective coating. The coating in particular required specialist manufacturing techniques to ensure the quality level required.

In addition to the actual product requirements the customer also required some very specific test data to ensure that the fibre cable met their specification.

## Our involvement

The customer approached us to find a reliable, consistent solution that could meet their requirements technically whilst also being cost effective.

Using our technical experienced coupled with our Worldwide sourcing capabilities we looked at the specific requirements and reached out to our partners in the optical fibre sector to identify the ones that had the required capabilities to meet the customers complex requirements.

Upon deciding on a partner we ensured that the customers technical and test requirements were fully understood with particular attention to the anti reflection coating as this requires the use of a vacuum technique to ensure proper application of the coating but it is not as simple as just using a vacuum.

With the requirements understood our partner proceeded to develop a vacuum process to ensure the quality of the anti reflective coating and to ensure no contamination. Prior to the coating the procedure ensure that the vacuum chamber was thoroughly cleaned and following coating the fibre ends were inspected using high magnification microscopes with pictures taken for the customers records.

The development of the new process ensured that manufacturing yield was high and as a result costs were reduced.

With key technical challenges met we provided samples to the customer along with data for the transmission performance and anti reflective coating performance. These were tested using the customers comprehensive inspection procedures. The result was that the samples passed and were well inside the parameters required. Based on these results we are now supplying product to the customer that is of a high quality and cost effective.

## Outcomes

Taking adequate time to understand the customer requirements and how they relate to the processes required to manufacture the product ensured not only quality but excellent control of costs. We are a firm believer that taking the time to fully understand the customers requirements both technically and commercially allows us to provide the best overall solution.

## Further development

Having taken the time to develop manufacturing processes that reduce contamination and provide high quality results we are in a position to confidently tackle complex fibre cable requirements to exacting standards. We have the capability to work within a wide range of wavelengths, even into infra-red.

To find out more or to discuss your requirements, please get in touch

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