



OPTICAL FIBER MEASUREMENT SPECIALISTS

# **The Next-Generation Encircled Flux Meter**

**Setting a New Industry Standard with  
Automated, User-Independent Results**

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**Ed Robinson**

Product Design Manager, Arden Photonics

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# Who are Arden Photonics?



OPTICAL FIBER MEASUREMENT SPECIALISTS

**We are the only specialty fiber  
measurement specialists**

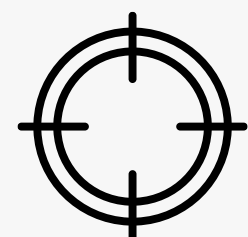


# Our Mission & Core Values

## Our Mission

We help optical fiber manufacturers to make better optical fibers for a brighter tomorrow.

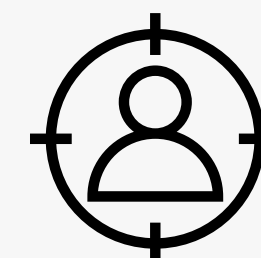
## Our Core Values



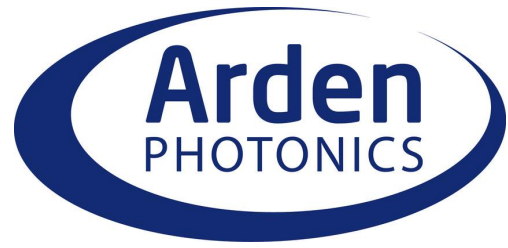
Precision



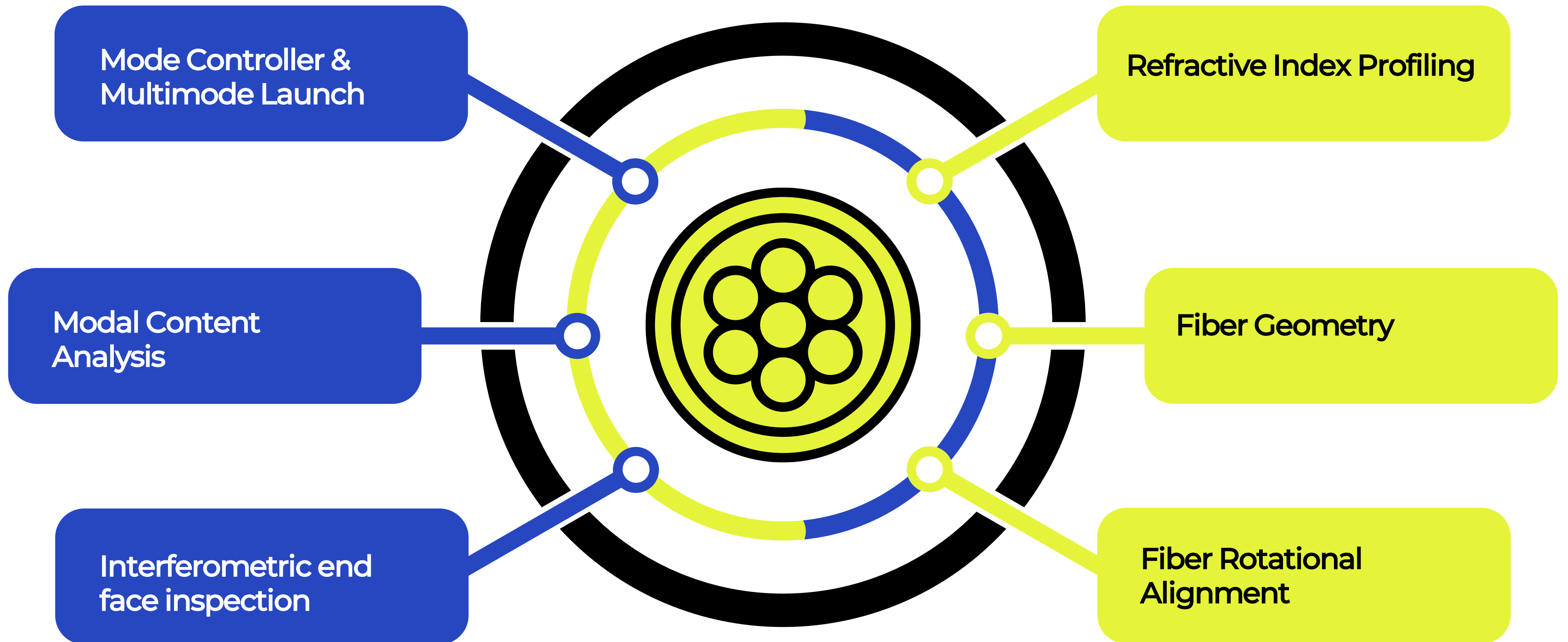
Quality



Customer  
Success

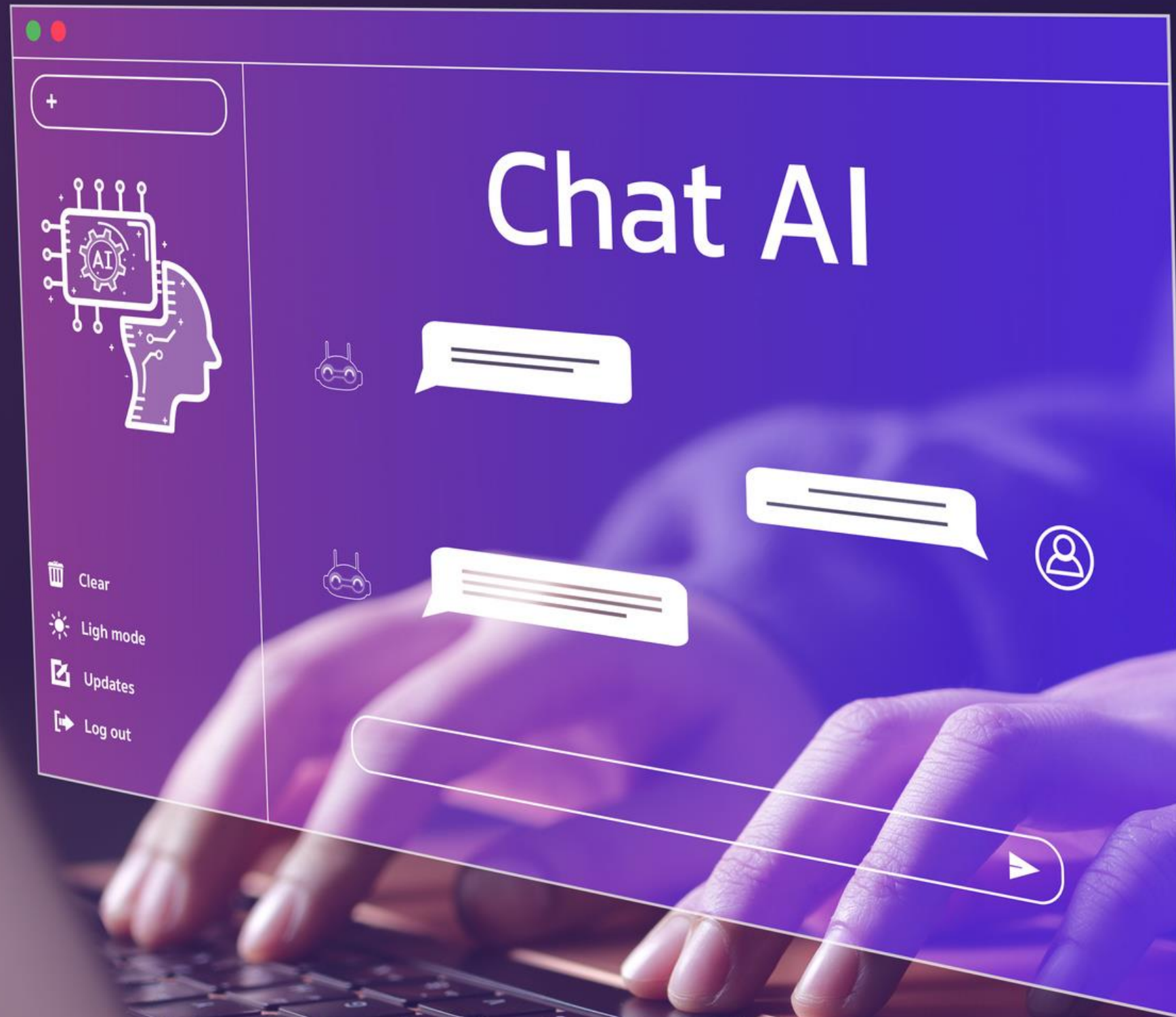


# We measure most fibers. Our Expertise are...





# Artificial Intelligence





# Cloud Computing





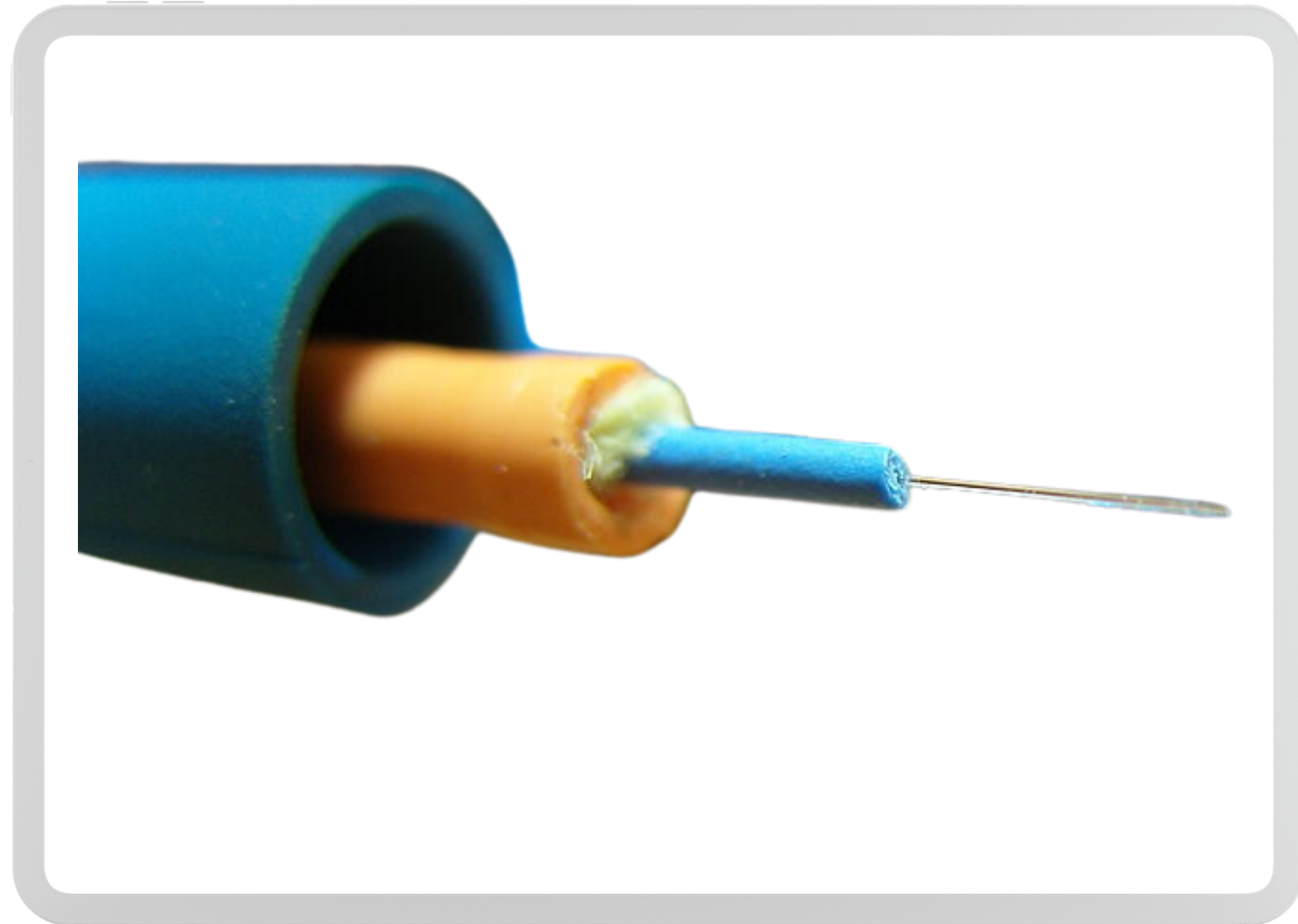
# High Speed Data Centres







# High speed multimode network



**Multimode Fiber**



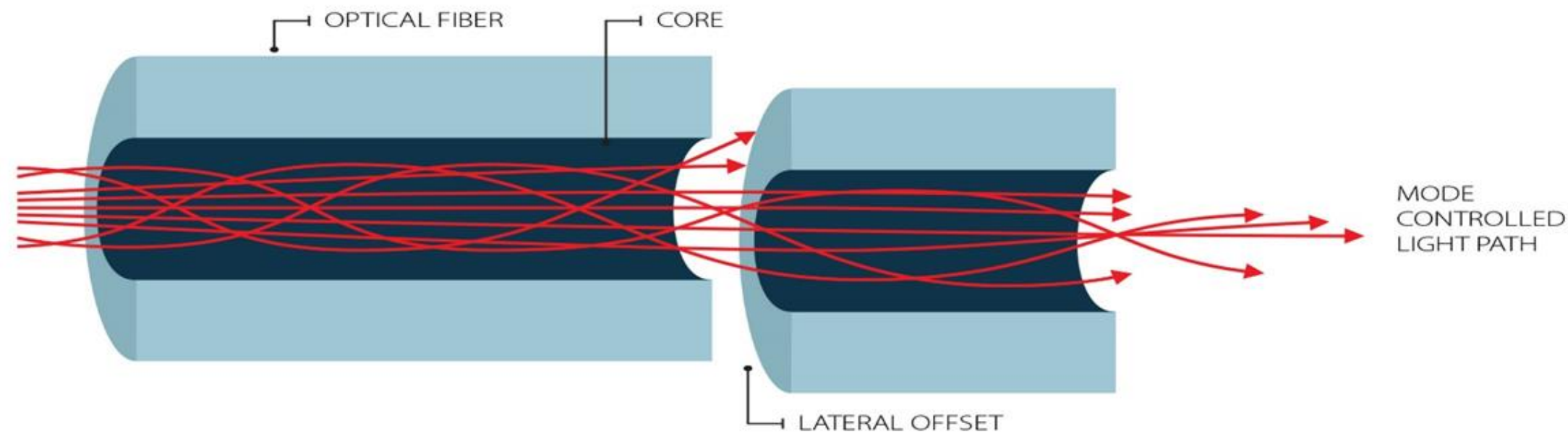
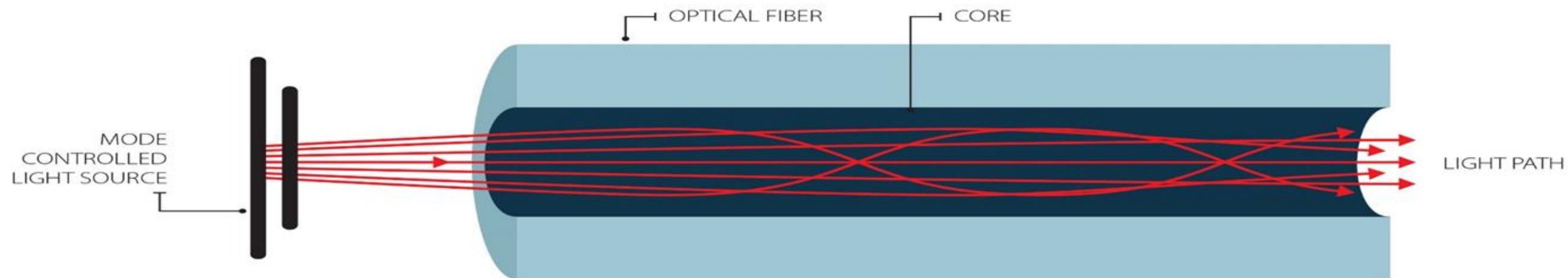
**Multimode Transceiver**





# Optimising multimode network - Encircled Flux (EF)

## An encircled flux compliant launch



Standardised amount of light into higher order modes

Improved  
Network  
Accuracy &  
Reliability

**Arden Solutions:**  
Encircled Flux Meter  
Mode Controller

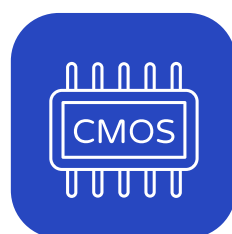


# The Next Encircled Flux Meter - MPX-1A



## Automatic Focus and Exposure

Ensure fast, precise, consistent and user-independent measurement results



## Latest CMOS Camera Technology

Accurate and rapid measurements



## Real-time Encircled Flux Measurement

Simplifies the process of assessing multimode network solutions



## International Standards compliance

TIA-526-14-A, IEC 61280-4-1, TIA/EIA-455-203, IEC 61280-1-4, IEEE 802.3



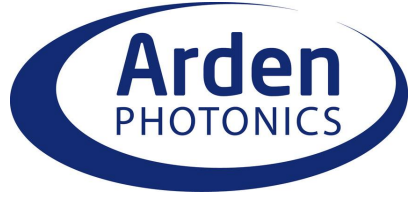


# Key Applications

- ✓ Source and patchcord characterisation for IEC11801 and TIA/EIA568 LAN testing
- ✓ VCSEL characterisation for Gigabit Ethernet IEEE 802.3



- ✓ Mode-scrambler and mode-filter characterisation
- ✓ Measure sources to IEC 61280-4-1
- ✓ Alignment of pig-tailed light sources



# User Interface (Measure Mode)

MPX Modal Explorer

Pause Exposure Time 10 Auto Expose Filter 20dB Auto Focus Inspect Measure Core Diameter (um) 50 Transmission LED Average Settings

Visible Image Live Operator XXXX Sample ID XXXX Save Load Clear

Create report

Line Profile

EF Diff Graph R 15 EF Diff -0.0691 Cursor

EF Table

Radius	Lower	Target	Upper	Current	Diff.	%	Pass?
10.0000	0.2785	0.3350	0.3915	0.2954	-0.0396	70	Pass
15.0000	0.5980	0.6550	0.7119	0.5859	-0.0691	121	Fail
20.0000	0.9105	0.9193	0.9295	0.8575	-0.0618	701	Fail
22.0000	0.9690	0.9751	0.9812	0.9361	-0.0390	639	Fail

EF Graph

MFD 5 49.4 um 98.8 % Non-Circularity 2.31 Power (dBm) -20.62

Measure mode - Transmission LED ON





# User Interface (Inspect Mode)

MPX Modal Explorer

Pause Exposure Time 25 Auto Expose Filter None Auto Focus Inspect Measure Core Diameter (um) 50 Transmission LED Average Settings

Visible Image Live Operator XXXX Sample ID XXXX Save Load Clear

Line Profile

EF Diff Graph

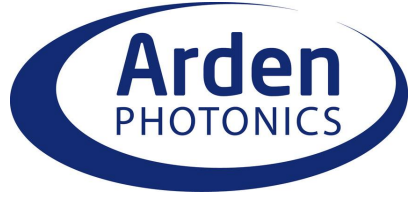
EF Table

Radius	Lower	Target	Upper	Current	Diff.	%	Pass?

EF Graph

MFD 5 0 um 0 % Non-Circularity 0.00 Power (dBm) 0.00

Autofocusing complete . . . .



# User Interface (Result Comparison)

MPX Modal Explorer

Pause Exposure Time 10 Auto Expose Filter 20dB Auto Focus Inspect Measure Core Diameter (um) 50 Transmission LED Average Settings

Visible Image: Live, 1002 - EFref01.zip, 1002 - EFref02.zip

Operator: XXXX Sample ID: XXXX Save Load Clear

Create report

Line Profile

EF Diff Graph

R: 15 EF Diff: -0.0105 Cursor

EF Table

Radius	Lower	Target	Upper	Current	Diff.	%	Pass?
10.0000	0.2785	0.3350	0.3915	0.3287	-0.0063	11	Pass
15.0000	0.5980	0.6550	0.7119	0.6445	-0.0105	18	Pass
20.0000	0.9105	0.9193	0.9295	0.9147	-0.0046	52	Pass
22.0000	0.9690	0.9751	0.9812	0.9757	0.0006	9	Pass

MFD: 5 46.2 um 92.3 % Non-Circularity: 1.08 Power (dBm): -20.59

EF Graph

Measure mode





## Contact Us



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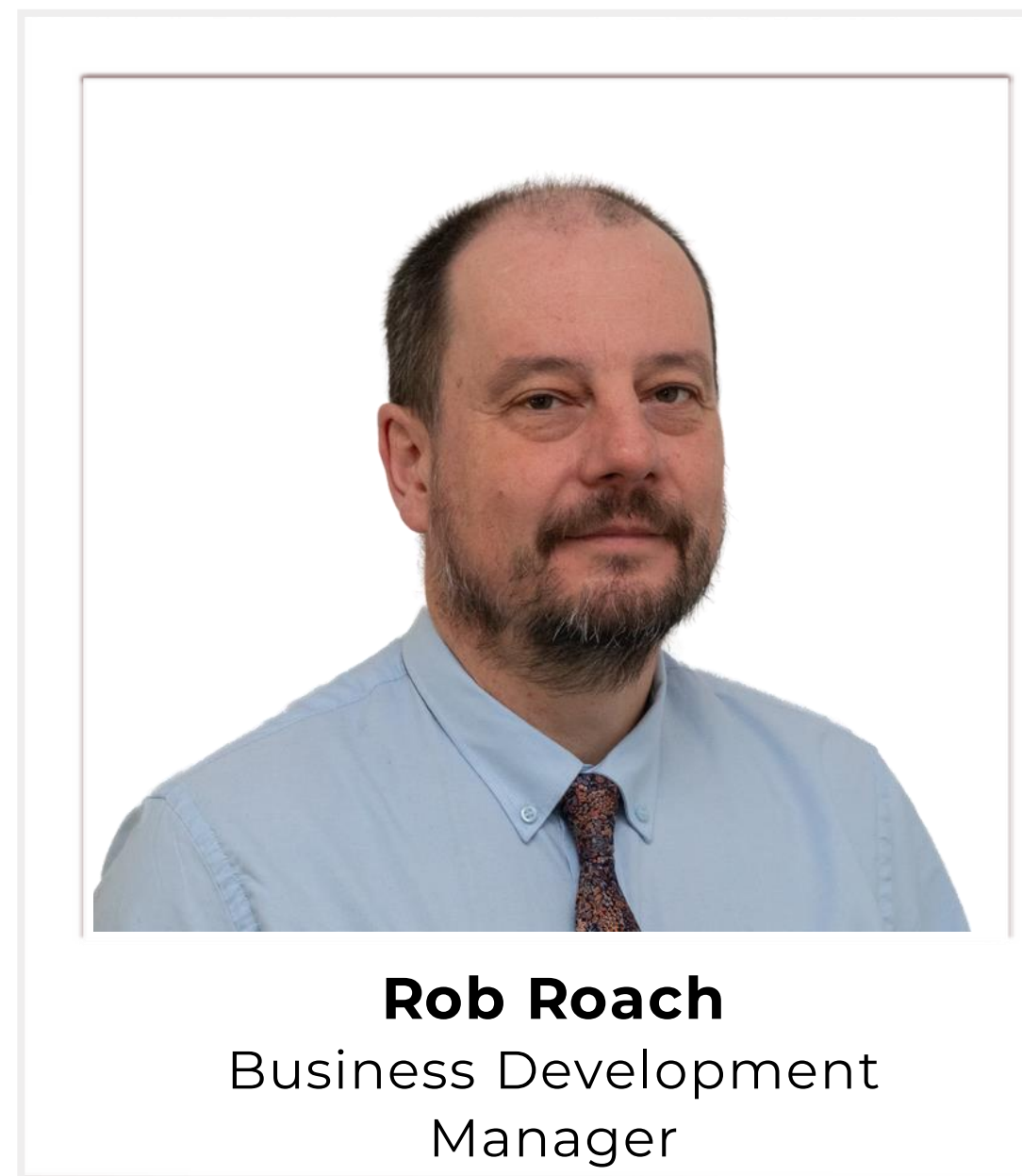
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