



# Feasa Optical Head – Data Sheet

The Feasa Optical Heads have been designed to ensure stability when testing the intensity of LEDs. The robust and compact design delivers consistent and repeatable readings with a <10% intensity change over a 1mm placement of the LED. The Optical Head addresses the following issues:

- Compensation for LED Placement
- Repeatable Intensity Readings
- Reduced sensitivity to ambient light

## Optical Head Specification & Ordering Information

These Optical Heads (OH) have a Diameter of 2.54mm and are suitable for Led centre to centre distance of 2.8mm: They are used with 1mm Plastic Optical Fiber (POF) which needs to be glued in place. The Temperature range is 0C – 70C

| Part No | Body Diameter - Imperial | Body Diameter - Metric | Drill Size in G10 | Overall Length (inc. Screw holder if applicable) | Minimum Centre to Centre Distance | Fiber   | Comments                                   |
|---------|--------------------------|------------------------|-------------------|--------------------------------------------------|-----------------------------------|---------|--------------------------------------------|
| OH-21   | 0.10 +/- .002            | 2.54 +/- 0.05 mm       | 0.1in / 2.54mm    | 1.000 +/- .005 in                                | 2.8mm                             | POF 1mm | Medium Intensity Leds, Fiber must be Glued |

These Optical Heads (OH) have a Diameter of 3mm and are suitable for Led centre to centre distance of 3.5mm: They are used with 1mm Plastic Optical Fiber (POF). The Temperature range is 0C – 70C

| Part No | Body Diameter - Imperial | Body Diameter - Metric | Drill Size in G10 | Overall Length (inc. Screw holder if applicable) | Minimum Centre to Centre Distance | Fiber   | Comments              |
|---------|--------------------------|------------------------|-------------------|--------------------------------------------------|-----------------------------------|---------|-----------------------|
| OH-1    | 0.120 +/- .001           | 3.022 – 3.073 mm       | 3.05mm            | 40mm                                             | 3.5mm                             | POF 1mm | Medium Intensity Leds |
| OH-1A   | 0.120 +/- .001           | 3.022 – 3.073 mm       | 3.05mm            | 40mm                                             | 3.5mm                             | POF 1mm | High Intensity Leds   |
| OH-24   | 0.120 +/- .001           | 3.022 – 3.073 mm       | 3.05mm            | 43mm                                             | 3.5mm                             | POF 1mm | Medium Intensity. 90° |

These Optical Heads (OH) have a Diameter of 3.55mm and are suitable for Led centre to centre distance of 4mm: They are used with 1mm Plastic Optical Fiber (POF). The Temperature range is 0C – 70C

| Part No | Body Diameter - Imperial | Body Diameter - Metric | Drill Size in G10 | Overall Length (inc. Screw holder if applicable) | Minimum Centre to Centre Distance | Fiber   | Comments              |
|---------|--------------------------|------------------------|-------------------|--------------------------------------------------|-----------------------------------|---------|-----------------------|
| OH-5    | 0.141 +/- .001           | 3.56 – 3.61 mm         | 3.55mm            | 49mm                                             | 4mm                               | POF 1mm | Medium Intensity Leds |
| OH-5S   | 0.141 +/- .001           | 3.56 – 3.61 mm         | 3.55mm            | 28mm                                             | 4mm                               | POF 1mm | Short (OH5)           |

These Optical Heads (OH) have a Diameter of 4.55mm and are suitable for Led centre to centre distance of 5mm: They are used with 1mm Plastic Optical Fiber (POF). The Temperature range is 0C – 70C

| Part No | Body Diameter - Imperial | Body Diameter - Metric | Drill Size in G10 | Overall Length (inc. Screw holder if applicable) | Minimum Centre to Centre Distance | Fiber   | Comments                    |
|---------|--------------------------|------------------------|-------------------|--------------------------------------------------|-----------------------------------|---------|-----------------------------|
| OH-3    | 0.180 +/- .002           | 4.623 – 4.521 mm       | 4.55mm            | 50mm                                             | 5mm                               | POF 1mm | Medium Intensity Leds       |
| OH-2    | 0.180 +/- .002           | 4.623 – 4.521 mm       | 4.55mm            | 29mm                                             | 5mm                               | POF 1mm | Short (OH3)                 |
| OH3-RGB | 0.180 +/- .002           | 4.623 – 4.521 mm       | 4.55mm            | 50mm                                             | 5mm                               | POF 1mm | Medium Intensity RGB Leds   |
| OH-4    | 0.180 +/- .002           | 4.623 – 4.521 mm       | 4.55mm            | 59mm                                             | 5mm                               | POF 1mm | Medium Intensity 90°        |
| OH-4S   | 0.180 +/- .002           | 4.623 – 4.521 mm       | 4.55mm            | 39mm                                             | 5mm                               | POF 1mm | Short (OH-4)                |
| OH-23   | 0.180 +/- .002           | 4.623 – 4.521 mm       | 4.55mm            | 52mm                                             | 5mm                               | POF 1mm | Super High Bright Intensity |
| OH-33   | 0.180 +/- .002           | 4.623 – 4.521 mm       | 4.55mm            | 51.5m                                            | 5mm                               | POF 1mm | High Bright Intensity       |



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These Optical Heads (OH) have a Diameter of 12mm and are suitable for Led centre to centre distance of 13mm: They are used with 1mm Plastic Optical Fiber (POF). The Temperature range is 0C – 70C

| Part No | Body Diameter - Imperial | Body Diameter - Metric | Drill Size in G10 | Overall Length (inc. Screw holder if applicable) | Minimum Centre to Centre Distance | Fiber   | Comments           |
|---------|--------------------------|------------------------|-------------------|--------------------------------------------------|-----------------------------------|---------|--------------------|
| OH-30   | 0.472 +/- .001           | 12.01 – 11.96 mm       | 12mm              | 57mm                                             | 13mm                              | POF 1mm | Large Diameter Led |
| OH-30s  | 0.472 +/- .001           | 12.01 – 11.96 mm       | 12mm              | 47mm                                             | 13mm                              | POF 1mm | Large Diameter Led |

These Optical Heads (OH) are suitable for Leds in High Temperature Environments: They are used with 1.1mm Glass Optical Fiber. The Temperature range is -65C to +125C. They are Recommended to be used with the Led Life Tester Analyser.

| Part No    | Body Diameter - Imperial | Body Diameter - Metric | Drill Size in G10 | Overall Length (inc. Screw holder if applicable) | Minimum Centre to Centre Distance | Fiber           | Comments              |
|------------|--------------------------|------------------------|-------------------|--------------------------------------------------|-----------------------------------|-----------------|-----------------------|
| OH-7LT     | 0.180 +/- .002           | 4.623 – 4.521 mm       | 4.55mm            | 39mm                                             | 5mm                               | Glass pre Glued | Medium Intensity Leds |
| OH-17LT    | 0.180 +/- .002           | 4.623 – 4.521 mm       | 4.55mm            | 39mm                                             | 5mm                               | Glass pre Glued | High Intensity Leds   |
| OH-10G-xxx | 0.040 – 0.036            | 1.016 – 0.9144 mm      | 1.00mm            | 52mm + Fiber xxx cm                              | 1.5mm                             | Glass pre Glued | High Intensity Leds   |

These Optical Heads (OH) have a Diameter of 4.55mm and are suitable for Led centre to centre distance of 5mm: They are used with 1.1mm Glass Optical Fiber. The Temperature range is 0C – +70C. They are Recommended to be used with the Infra Red Led Analyser for Wavelength up to 950nm

| Part No | Body Diameter - Imperial | Body Diameter - Metric | Drill Size in G10 | Overall Length (inc. Screw holder if applicable) | Minimum Centre to Centre Distance | Fiber       | Comments            |
|---------|--------------------------|------------------------|-------------------|--------------------------------------------------|-----------------------------------|-------------|---------------------|
| OH8-IR  | 0.180 +/- .002           | 4.623 – 4.521 mm       | 4.55mm            | 50mm                                             | 5mm                               | Glass / POF | Standard IR Leds    |
| OH8A-IR | 0.180 +/- .002           | 4.623 – 4.521 mm       | 4.55mm            | 51.5mm                                           | 5mm                               | Glass / POF | High Bright IR Leds |

These Optical Heads (OH) have a Diameter of 8.00mm and are suitable for Led centre to centre distance of 9mm: They are used with 1mm Plastic Optical Fiber (POF). The OH-6S has a diameter of 10.2mm and a centre to centre distance of 11mm. The Temperature range is 0C – 70C.

| Part No | Body Diameter - Imperial | Body Diameter - Metric | Drill Size in G10 | Overall Length (inc. Screw holder if applicable) | Minimum Centre to Centre Distance | Fiber   | Comments                  |
|---------|--------------------------|------------------------|-------------------|--------------------------------------------------|-----------------------------------|---------|---------------------------|
| OH-6    | 0.315 +/- .001           | 7.975 – 8.026 mm       | 8.00mm            | 51mm                                             | 9mm                               | POF 1mm | High Bright Intensity Led |
| OH-6N   | 0.315 +/- .001           | 7.975 – 8.026 mm       | 8.00mm            | 49.5mm                                           | 9mm                               | POF 1mm | Medium Intensity Led      |
| OH6-RGB | 0.315 +/- .001           | 7.975 – 8.026 mm       | 8.00mm            | 50mm                                             | 9mm                               | POF 1mm | RGB Led Test              |
| OH-26   | 0.315 +/- .001           | 7.975 – 8.026 mm       | 8.00mm            | 52mm                                             | 9mm                               | POF 1mm | Super High Bright Int.    |

These Optical Heads (OH) have a Diameter of 6.55mm and are suitable for Led centre to centre distance of 7mm: They are used with 1mm Plastic Optical Fiber (POF). The Temperature range is 0C – 70C. They are recommended for use in an RF Environment.

| Part No | Body Diameter - Imperial | Body Diameter - Metric | Drill Size in G10 | Overall Length (inc. Screw holder if applicable) | Minimum Centre to Centre Distance | Fiber   | Comments       |
|---------|--------------------------|------------------------|-------------------|--------------------------------------------------|-----------------------------------|---------|----------------|
| OH-9RF  | 0.246 +/- .002           | 6.20 – 6.30 mm         | 6.25mm            | 50mm                                             | 7mm                               | POF 1mm | RF Testing     |
| OH-19RF | 0.226 +/- .002           | 6.20 – 6.30 mm         | 6.25mm            | 35mm                                             | 7mm                               | POF 1mm | RF Testing 90° |
| OH-19RF | 0.257 +/- .002           | 6.25 – 6.55 mm         | 6.55mm            | 35mm                                             | 7mm                               | POF 1mm | RF Testing 90° |



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This Optical Heads (OH) have been developed for specific Customer Requirements

| Part No | Body Diameter - Imperial | Body Diameter - Metric | Drill Size in G10 | Overall Length (inc. Screw holder if applicable) | Minimum Centre to Centre Distance | Fiber       | Comments                      |
|---------|--------------------------|------------------------|-------------------|--------------------------------------------------|-----------------------------------|-------------|-------------------------------|
| OH-7D   | 0.180 +/- .002           | 4.52 – 4.62 mm         | 4.55mm            | 40mm + 2 Fibers 60cm                             | 5mm                               | Glass / POF | Combination of Glass & or POF |

These Optical Heads (OH) have a Diameter of 0.9mm - 1.00mm and are suitable for Leds centre to centre distance of 1.5mm: They are pre-fitted with 60cm long 1mm Plastic Optical Fiber (POF). The Temperature range is 0C – 70C for the OH-10 & OH-11. The Temperature range is -65C – +125C for the OH-10G-XX. They are recommended for testing High Bright Leds such as headlights and rear light of cars.

| Part No | Body Diameter - Imperial | Body Diameter - Metric | Drill Size in G10 | Overall Length (inc. Screw holder if applicable) | Minimum Centre to Centre Distance | Fiber             | Comments         |
|---------|--------------------------|------------------------|-------------------|--------------------------------------------------|-----------------------------------|-------------------|------------------|
| OH-10   | 0.040 – 0.036            | 1.016 – 0.9144 mm      | 1.00mm            | 52mm + Fiber 60cm                                | 1.5mm                             | POF 1mm pre Glued | High Bright Int. |
| OH-11   | 0.0357 +/- .001          | 0.904 – 0.909 mm       | 0.90mm            | 35mm + Fiber 60cm                                | 1.1mm                             | POF 1mm pre Glued | High Bright Int. |

These Optical Heads are recommended for testing with the Low Light and RGB Analyser Range. They require 2.2mm Plastic Optical Fiber (POF) to be glued in place. The Temperature range is 0C – 70C.

| Part No | Body Diameter - Imperial | Body Diameter - Metric | Drill Size in G10 | Overall Length (inc. Screw holder if applicable) | Minimum Centre to Centre Distance | Fiber     | Comments     |
|---------|--------------------------|------------------------|-------------------|--------------------------------------------------|-----------------------------------|-----------|--------------|
| OH-12   | 0.180 +/- .002           | 4.623 – 4.521 mm       | 4.55mm            | 29mm                                             | 5mm                               | POF 2.2mm | Short (OH13) |
| OH-13   | 0.180 +/- .002           | 4.623 – 4.521 mm       | 4.55mm            | 37mm                                             | 5mm                               | POF 2.2mm |              |
| OH-14   | 0.180 +/- .002           | 4.623 – 4.521 mm       | 4.55mm            | 45.5mm                                           | 5mm                               | POF 2.2mm | 90°          |
| OH-14S  | 0.180 +/- .002           | 4.623 – 4.521 mm       | 4.55mm            | 32mm                                             | 5mm                               | POF 2.2mm | Short (OH14) |

They are designed to be used with the Feasa Low Light and RGB Analyser Range. These Optical Heads (OH) have a Diameter of 8.00mm and are suitable for Led centre to centre distance of 9mm: They use 2.2mm Plastic Optical Fiber (POF). The Temperature range is 0C – 70C.

| Part No | Body Diameter - Imperial | Body Diameter - Metric | Drill Size in G10 | Overall Length (inc. Screw holder if applicable) | Minimum Centre to Centre Distance | Fiber     | Comments                                                   |
|---------|--------------------------|------------------------|-------------------|--------------------------------------------------|-----------------------------------|-----------|------------------------------------------------------------|
| OH-16   | 0.400 +/- .005           | 10.2 +/- 0.15 mm       | 10.2mm            | 51mm                                             | 11mm                              | POF 2.2mm | Discontinued                                               |
| OH-31   | 0.472 +/- .001           | 11.80 – 12.02 mm       | 12mm              | 57mm                                             | 13mm                              | POF 2.2mm | Large Diameter Led                                         |
| OH-34   | 0.315 +/- .001           | 7.975 – 8.026 mm       | 8.00mm            | 60.5mm                                           | 9mm                               | POF 2.2mm | For use with RGB & Low Light Analyser, 90°, Low Intensity  |
| OH-34A  | 0.315 +/- .001           | 7.975 – 8.026 mm       | 8.00mm            | 60.5mm                                           | 9mm                               | POF 2.2mm | For use with RGB & Low Light Analyser, 90°, High Intensity |
| OH-36   | 0.315 +/- .001           | 7.975 – 8.026 mm       | 8.00mm            | 53.75mm                                          | 9mm                               | POF 2.2mm | For use with RGB & Low Light Analyser, Low Intensity       |
| OH-36A  | 0.315 +/- .001           | 7.975 – 8.026 mm       | 8.00mm            | 55.5mm                                           | 9mm                               | POF 2.2mm | For use with RGB & Low Light Analyser, High Intensity      |



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## ***Feasa Optical Head – Data Sheet***

Feasa continues to develop Optical Heads for new applications. We can provide specialised customer solutions when possible. Please contact Feasa if you require advice or assistance on Optical Head design.



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