

# KONGSBERG SIMRAD OE2800 / OE2801 Fluorescein Dye Detection System

- Leak Detection
- Cost Effective
- Rapid Deployment

The Kongsberg Simrad Fluorescein Dye detection package is based on the highly successful OE1366 ROV zoom inspection camera and the OE11-135 underwater floodlight. Modification of the colour temperature output of the lamp allows fluorescein dye to fluoresce when illuminated. Modification of the light wavelength response of the camera allows the camera to only detect the wavelength of light corresponding to the dye fluorescence. This system allows for easy detection of leaks during integrity testing.

The system is supplied with a baseplate to ensure that convergence of the lamp beam and camera field of view occurs at around 2 metres. This innovative solution to leak detection offers significant improvements in detection speed and operational costs.

A variation of the system for diver use is also available.

The Standard OE2800 consists of

- 1 off OE1366F / OE1367F Underwater Camera
- 2 off OE11-135F Underwater Lamp
- Baseplate



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# KONGSBERG SIMRAD OE2800 / OE2801 OEI366F / OEI367F Underwater Camera

- 12:1 Zoom
- Fluorescein Dye Detection
- Leak Detection

The Kongsberg Simrad OEI366 (PAL) and OEI367 (NTSC) Colour Zoom Cameras use the latest Hyper-HAD solid state sensor to provide excellent light sensitivity and image definition. These cameras have been designed to offer maximum performance and flexibility for ROV inspection tasks.

The OEI366 has now been modified to create a variant for Fluorescein Dye detection, the OEI366F. The OEI366F enjoys all of the features of the OEI366 but has been additionally adapted to detect the wavelength of light emitted by Fluorescein Dye when excited.



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## STANDARD FEATURES

### Electrical

|                                |   |
|--------------------------------|---|
| Horizontal Resolution          | 450 TV Lines for OEI366F<br>460 TV Lines for OEI367F                  |
| Light Sensitivity              | 0.1 Lux (faceplate)   |
| Sensor Type                    | 1/3" Hyper-HAD CCD  |
| Signal to Noise Ratio          | >48dB (weighted)  |
| Scanning                       | 625 Line / 50 Hz PAL for OEI366F<br>525 Line / 60 Hz NTSC for OEI367F |
| Power Input                    | Constant Voltage 16V - 24V dc<br>550mA maximum                        |
| Video Output                   | 1V Pk - Pk composite video into 75Ω                                   |
| Focus / Zoom Control           | Standard Single-Wire Tri-state  |
| Electro-Magnetic Compatibility | EN50081-1 Emission / EN50082-1 Immunity                               |

### Environmental

|             |   |
|-------------|---|
| Water Depth | 3,000 metres, deeper options available            |
| Temperature | Operating -5°C to +40°C<br>Storage -20°C to +60°C |
| Vibration   | 10g, 20 - 150Hz, 3-axes (non-operating)           |
| Shock       | 30g peak, 25mS half-sine pulse                    |

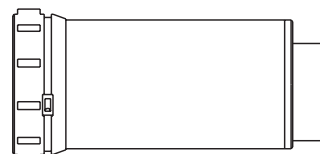
### Optical

|                    |   |
|--------------------|---|
| Detection          | Fluorescein Dye detection system fitted                   |
| Zoom Lens          | 12:1 Magnification, 5.4mm to 65mm f/1.8 - 2.7             |
| Water Compensation | Multi-Element Optical Compensator                         |
| Iris Control       | Automatic   |
| Focus Control      | Remote Control, 0mm to Infinity                           |
| Angle of View      | 55° (min. Zoom) to<br>5.3° (max. Zoom) diagonal, in water |

### Mechanical

|                  |                                      |                              |
|------------------|--------------------------------------|------------------------------|
| Size             | Diameter                             | 80mm (3.15") main body       |
|                  | Diameter                             | 93mm (3.66") rubber guard    |
|                  | Length                               | 175mm (6.89") exc. connector |
| Weight           | Air                                  | 1.8 Kg (4.0 lb.)             |
|                  | Water                                | 1.0 Kg (2.2 lb.)             |
| Standard Housing | 6Al/4V ASTM B 348 Titanium Alloy     |                              |
| Connector        | Sea-Con FAWM-8P-BCRA (or equivalent) |                              |

Other Connector options available



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Kongsberg Simrad reserve the right to amend specifications without notice.

# KONGSBERG SIMRAD OE2800 / OE2801 OE11-135F Lamp

- Adapted Colour Temperature
- Pressure Balanced
- Quick Detection

Kongsberg Simrad's range of underwater lamps have been designed to address the specific requirements of high quality underwater video inspection and observation tasks.

The OE11-135 is a compact high power lamp specifically designed for diver and ROV deployment applications.

The OE11-135 has now been modified to create a variant for Fluorescein Dye detection, the OE11-135F. The OE11-135F enjoys most of the features of the OE11-135 but has been adapted by the incorporation of a filter system which modifies the lamp colour temperature. This modified output allows Fluorescein Dye to fluoresce when illuminated.



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## STANDARD FEATURES

### Electrical

|           |  |
|-----------|--|
| Lighting  | Plug-in high efficiency quartz halogen bulb. Fully variable output |
| Power     | 115V / 300 Watt  |
| Reflector | Integral internal body reflector                                   |

### Environmental

|              |   |
|--------------|---|
| Depth Rating | 3,000 metres standard                             |
| Temperature  | Operating -5°C to +40°C<br>Storage -20°C to +60°C |

### Mechanical

|                      |  |                           |
|----------------------|--|---------------------------|
| Size                 | Diameter   | 93mm (3.66") rubber guard |
|                      | Diameter   | 80mm (3.15") main body    |
|                      | Length   | 48mm (1.9") rear body     |
| Weight               | Air  | 0.7 kg (1.54 lbs)         |
|                      | Water  | 0.5 kg (1.10 lbs)         |
| Corrosion Protection | Hard Anodised, Black Dyed  |                           |
| Housing              | 6082-T6 Marine Grade Aluminium   |                           |
| Connector            | EO Type (or equivalent) 59F2M<br>Right-angle Connector options available |                           |

### Optical

|              |  |
|--------------|--|
| Light Output | Colour temperature modification system fitted.<br>Filter system oil filled and pressure balanced to match depth rating |
|--------------|--|

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