ALS LED Light Source
with 85/85 launch condition

- Compact hand held light source
- Insertion Loss testing for Aerospace applications
- Provides stable 85/85% launch conditions for multimode fiber measurements
- 1300nm or 850nm LED
- For 62.5/125 µm or 50/125 µm fiber
- Rechargeable Li-Ion battery with 48hr life

The ALS handheld optical fiber source is used with an Optical Power Meter to measure the loss of multimode optical fiber systems, in applications which require 85/85% Limited Phase Space modal launch conditions. The ALS provides excellent stability and ease of use.

The 85/85% modal launch condition is used specifically in the aerospace industry, and it’s widely used by Airbus for certification of its optical fiber harnesses.

### Technical Specification - ALS LED Light Source

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Source Type</th>
<th>Centre Wavelength</th>
<th>Spectral Width</th>
<th>Dimensions</th>
<th>Weight</th>
<th>Optical Power Output</th>
<th>Optical Power Stability</th>
<th>Optical Launch Condition</th>
<th>Connector Interface</th>
<th>Power</th>
<th>Battery Life</th>
<th>Case</th>
<th>Operating Temperature</th>
<th>Storage Temperature</th>
<th>Humidity</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALS-1300-62-85-HH</td>
<td>1300nm LED light source with FC connector to deliver 85/85% modal launch into 62.5/125 µm fiber.</td>
<td>LED</td>
<td>1300nm</td>
<td>155nm (FWHM)</td>
<td>200 x 120 x 35mm</td>
<td>0.5kg</td>
<td>-20dBm into 62.5/125 µm fiber</td>
<td>± 0.05 dB over 1 hour</td>
<td>85/85% Limited Phase Space</td>
<td>FC</td>
<td>Built-in Li-Ion battery (External charger supplied)</td>
<td>48 hours continuous</td>
<td>ABS</td>
<td>0° to +50°C</td>
<td>-10° to +60°C</td>
<td>5% – 95% relative, non-condensing</td>
</tr>
<tr>
<td>ALS-1300-50-85-HH</td>
<td>1300nm LED light source with FC connector to deliver 85/85% modal launch into 50/125 µm fiber.</td>
<td>LED</td>
<td>1300nm</td>
<td>155nm (FWHM)</td>
<td>200 x 120 x 35mm</td>
<td>0.5kg</td>
<td>-20dBm into 50/125 µm fiber</td>
<td>± 0.05 dB over 1 hour</td>
<td>85/85% Limited Phase Space</td>
<td>FC</td>
<td>Built-in Li-Ion battery (External charger supplied)</td>
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</tr>
<tr>
<td>ALS-0850-62-85-HH</td>
<td>850nm LED light source with FC connector to deliver 85/85% modal launch into 62.5/125 µm fiber.</td>
<td>LED</td>
<td>850nm</td>
<td>50nm (FWHM)</td>
<td>200 x 120 x 35mm</td>
<td>0.5kg</td>
<td>-20dBm into 62.5/125 µm fiber</td>
<td>± 0.05 dB over 1 hour</td>
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<td>FC</td>
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<tr>
<td>ALS-0850-50-85-HH</td>
<td>850nm LED light source with FC connector to deliver 85/85% modal launch into 50/125 µm fiber.</td>
<td>LED</td>
<td>850nm</td>
<td>50nm (FWHM)</td>
<td>200 x 120 x 35mm</td>
<td>0.5kg</td>
<td>-20dBm into 50/125 µm fiber</td>
<td>± 0.05 dB over 1 hour</td>
<td>85/85% Limited Phase Space</td>
<td>FC</td>
<td>Built-in Li-Ion battery (External charger supplied)</td>
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### Insertion loss test kits
Arden can also provide a full insertion loss test kit. This kit comes with an ALS - LED light source, a battery charger, a power meter and all the power meter leads/patchcords/ couplers required.

Manufactured by
Arden Photonics Ltd,
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+44 (0)121 733 7721

Arden Photonics, LLC,
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Clearwater, FL 33762, USA
+1 (727)478-2651

www.ardenphotonics.com
enquiries@ardenphotonics.com
ALS LED Light Source
with 85/85 launch condition

Launch condition for ALS Light Sources

The modal launch conditions for our ALS light sources are specified in terms of the width of the Near Field Pattern at 5, 15 and 75% of the maximum. The specification limits are shown below. A Certificate of Conformance is provided as standard; a Test Certificate (850 and 1300nm) giving details of how it was measured is available as an option.

Launch condition for 62.5/125 µm fiber

<table>
<thead>
<tr>
<th>Intensity (% of max)</th>
<th>Maximum value (µm)</th>
<th>Minimum value (µm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>55</td>
<td>51</td>
</tr>
<tr>
<td>15</td>
<td>52</td>
<td>45</td>
</tr>
<tr>
<td>75</td>
<td>33</td>
<td>20</td>
</tr>
</tbody>
</table>

Launch condition for 50/125 µm fiber

<table>
<thead>
<tr>
<th>Intensity (% of max)</th>
<th>Maximum value (µm)</th>
<th>Minimum value (µm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>44.0</td>
<td>40.8</td>
</tr>
<tr>
<td>15</td>
<td>41.6</td>
<td>36.0</td>
</tr>
<tr>
<td>75</td>
<td>26.4</td>
<td>16.0</td>
</tr>
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</table>

Ordering Information

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<th>Part Number</th>
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<tr>
<td>ALS-1300-62-85-HH</td>
<td>1300nm LED light source with FC connector to deliver 85/85% modal launch into 62.5/125 µm fiber. External battery charger, storage case, Certificate of Conformance and User Manual are included.</td>
</tr>
<tr>
<td>ALS-1300-50-85-HH</td>
<td>1300nm LED light source with FC connector to deliver 85/85% modal launch into 50/125 µm fiber. External battery charger, storage case, Certificate of Conformance and User Manual are included</td>
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<tr>
<td>ALS-0850-62-85-HH</td>
<td>850nm LED light source with FC connector to deliver 85/85% modal launch into 62.5/125 µm fiber. External battery charger, storage case, Certificate of Conformance and User Manual are included</td>
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<td>ALS-0850-50-85-HH</td>
<td>850nm LED light source with FC connector to deliver 85/85% modal launch into 50/125 µm fiber. External battery charger, storage case, Certificate of Conformance and User Manual are included</td>
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Options

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<th>Description</th>
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<tbody>
<tr>
<td>ALS-BC</td>
</tr>
<tr>
<td>ALS-CC</td>
</tr>
<tr>
<td>ALS-TC</td>
</tr>
<tr>
<td>ALS-UM</td>
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</tbody>
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# ALS LED Light Source

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## Ordering Information

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<th>Accessories</th>
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<tr>
<td>ALS-RR</td>
<td>ALS light source recertification. Includes product check and adjustment if required, retest and issue of new Certificate of Conformance.</td>
</tr>
<tr>
<td>ALS-560XL</td>
<td>560XL InGaAs Optical Power Meter</td>
</tr>
<tr>
<td>ALS-T1020</td>
<td>T1020 SOC adapter for NTT/FC-PC (you will need at least one adaptor to use the 560XL Power Meter)</td>
</tr>
<tr>
<td>ALS-CT01</td>
<td>Coupler tube for linking two Elio terminated patchcords in order to null the power meter before IL testing</td>
</tr>
<tr>
<td>ALS-TL01-50-FC/FC-S</td>
<td>Test lead for use with 85/85 Light Source/Power Meter. Made in 50/125 µm fiber, 1.5m long with FC connectors on each end, Cable construction 3mm diameter PVC sheath, with Aramid yarn strength number.</td>
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<tr>
<td>ALS-TL01-62-FC/FC-S</td>
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<td>ALS-TL01-50-FC/Elio-S</td>
<td>Test lead for use with 85/85 Light Source/Power Meter. Made in 50/125 µm fiber, 1.5m long with FC connector on one end, Elio connector on the other. Cable construction 2mm diameter PVC sheath, with Aramid yarn strength member.</td>
</tr>
<tr>
<td>ALS-TL01-62-FC/Elio-S</td>
<td>Test lead for use with 85/85 Light Source/Power Meter. Made in 62.5/125 µm fiber, 1.5m long with FC connector on each end, Elio connector on the other. Cable construction 2mm diameter PVC sheath, with Aramid yarn strength member.</td>
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<tr>
<td>ALS-TL01-50-FC/SC-S</td>
<td>Test lead for use with 85/85 Light Source/Power Meter. Made in 50/125 µm fiber, 1.5m long with FC connector on one end, SC connector on the other. Cable construction 3mm diameter PVC sheath, with Aramid yarn strength member.</td>
</tr>
<tr>
<td>ALS-TL01-62-FC/SC-S</td>
<td>Test lead for use with 85/85 Light Source/Power Meter. Made in 62.5/125 µm fiber, 1.5m long with FC connector on one end, SC connector on the other. Cable construction 3mm diameter PVC sheath, with Aramid yarn strength member.</td>
</tr>
<tr>
<td>ALS-TL01-50-FC/ST-S</td>
<td>Test lead for use with 85/85 Light Source/Power Meter. Made in 50/125 µm fiber, 1.5m long with FC connector on one end, ST connector on the other. Cable construction 3mm diameter PVC sheath, with Aramid yarn strength member.</td>
</tr>
<tr>
<td>ALS-TL01-62-FC/ST-S</td>
<td>Test lead for use with 85/85 Light Source/Power Meter. Made in 62.5/125 µm fiber, 1.5m long with FC connectors on one end, ST connector on the other. Cable construction 3mm diameter PVC sheath, with Aramid yarn strength member.</td>
</tr>
<tr>
<td>ALS-TK01-1300-62</td>
<td>Insertion Loss Test Kit containing 1 x ALS-1300-62-85-HH 1300nm LED light source, 1 x battery charger, 1 x 560XL Power Meter, 1 x ALS-T1020 FC-PC adapter for Power meter, 2 x ALS-TL01-62-FC/Elio-S test leads, 1 x ALS-TL01-62-FC/FC-S test lead, 1 x ALS-CT01 Elio coupler tube. In waterproof carrying case.</td>
</tr>
<tr>
<td>ALS-TK01-1300-50</td>
<td>Insertion Loss Test Kit containing 1 x ALS-1300-50-85-HH 1300nm LED light source, 1 x battery charger, 1 x 560XL Power Meter, 1 x ALS-T1020 FC-PC adapter for Power meter, 2 x ALS-TL01-50-FC/Elio-S test leads, 1 x ALS-TL01-50-FC/FC-S test lead, 1 x ALS-CT01 Elio coupler tube. In waterproof carrying case.</td>
</tr>
<tr>
<td>ALS-TK01-0850-62</td>
<td>Insertion Loss Test Kit containing 1 x ALS-0850-62-85-HH 850nm LED light source, 1 x battery charger, 1 x 560XL Power Meter, 1x ALS-T1020 FC-PC adapter for Power meter, 2 x ALS-TL01-62-FC/Elio-S test leads, 1 x ALS-TL01-62-FC/FC-S test lead, 1x ALS-CT01 Elio coupler tube. In waterproof carrying case.</td>
</tr>
<tr>
<td>ALS-TK01-0850-50</td>
<td>Insertion Loss Test Kit containing 1 x ALS-0850-50-85-HH 850nm LED light source, 1 x battery charger, 1 x 560XL Power Meter, 1x ALS-T1020 FC-PC adapter for Power meter, 2 x ALS-TL01-50-FC/Elio-S test leads, 1 x ALS-TL01-50-FC/FC-S test lead, 1x ALS-CT01 Elio coupler tube. In waterproof carrying case.</td>
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