ACE® Light Source

Compact, rugged, AC halogen light source with solid state dimmer for variable light intensity and maximizing lamp life.

Standard Features
- Solid state dimmer for continuous control zero to full intensity.
- Heavy duty, grounded metal housing.
- 115 or 230 input voltage versions available.
- IR interference filter for cool illumination.
- Full illumination on .60” active diameter input.
- Interchangeable Modulamp® Units offer 2 positions to maximize individual lamp efficiencies.
- Choice of three, 150 watt halogen lamps - EJA, EKE, and DDL for intense, uniform illumination.
- Built-in thermal shut down.
- Quiet rear exhaust.
- CSA approved to UL spec, CE compliant to low voltage and EMC directives.
- Stackable with retractable handle.
- Low housing temp - slightly above ambient.
- Detachable IEC cord.
- 3-year warranty (excludes lamp and socket).
- Manufactured in the USA.

ACE® Light Source Models

<table>
<thead>
<tr>
<th>115 Volt</th>
<th>230 Volt</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A20500</td>
<td>A20510</td>
<td>EKE Lamp</td>
</tr>
<tr>
<td>A20500.1</td>
<td>A20510.1</td>
<td>EJA Lamp</td>
</tr>
<tr>
<td>A20500.2</td>
<td>A20510.2</td>
<td>DDL Lamp</td>
</tr>
<tr>
<td>Light Sources with Iris Diaphragm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A20520</td>
<td>A20530</td>
<td>EKE Lamp</td>
</tr>
<tr>
<td>A20520.1</td>
<td>A20530.1</td>
<td>EJA Lamp</td>
</tr>
<tr>
<td>A20520.2</td>
<td>A20530.2</td>
<td>DDL Lamp</td>
</tr>
<tr>
<td>Light Source without Modulamp® Unit</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A20500.115</td>
<td>A20510.230</td>
<td>No Lamp Power Supply Only</td>
</tr>
</tbody>
</table>

EKE, DDL, and EJA lamps and Modulamp® units can be purchased separately.

Options
- Rear baffle.
- Dimmer lock.
- Shutter module.
- Private labeling available.
- Infinite setting, thirteen blade iris diaphragm version available to reduce intensity while maintaining color temperature.
- ACE® Remote light source is also available. See section 01.01.05 in product catalog.

Power Supply Specifications

<table>
<thead>
<tr>
<th>Power Consumption</th>
<th>190 Watts (nominal)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output Voltage</td>
<td>0 - 21 VAC</td>
</tr>
<tr>
<td>Fiber Receptacle</td>
<td>.720 (13.3 mm)</td>
</tr>
<tr>
<td>Input Voltage</td>
<td>115 VAC / 60 Hz</td>
</tr>
<tr>
<td></td>
<td>230 VAC / 50/60 Hz</td>
</tr>
<tr>
<td>Temperature Range:</td>
<td>Operating</td>
</tr>
<tr>
<td></td>
<td>0° to 50°C</td>
</tr>
</tbody>
</table>
ACE® Light Source
Dimensions in ( ) are in mm

Modulamp®... SCHOTT Innovation!
Two positions optimize light intensity output, depending on the lamp in use. Entire housing is interchangeable for quick setup.

Choice of Lamps... SCHOTT Versatility!
Three different bulbs (EJA, EKE, DDL) offer light intensity and color temperature options to maximize productivity and accuracy.

Solid State Dimmer...SCHOTT Control!
Continuous intensity control for lamp life management.

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ACE® Remote Light Source

All the features of our universally accepted ACE® light source with the added convenience of the following:

Remote Features
- 6’ shielded black cable provides remote intensity control, including ON/OFF.
- Positive locking, quick disconnect cable will not pull out.
- CSA approved to UL spec, CE compliant to low voltage and EMC directives.
- 10’ shielded extension available as an option.
- Control assembly is supplied in black only.
- Quantities delivered in 4-5 weeks.

Standard Features
- Heavy duty, grounded metal housing.
- 115 or 230 input voltage versions available.
- IR interference filter for cool illumination.
- Full illumination on .60” active diameter input.
- Solid state dimmer control.
- Interchangeable Modulamp® Units offer 2 positions to maximize individual lamp efficiencies.
- Choice of three, 150 watt halogen lamps - EJA, EKE, and DDL for intense, uniform illumination.
- Built-in thermal shut down.
- Quiet rear exhaust.
- Zero to full intensity.
- Stackable with retractable handle.
- Low housing temp - slightly above ambient.
- Detachable IEC cord.
- 3-year warranty (excludes lamp and socket).
- Manufactured in the USA.

Options
- Rear baffle.
- Shutter module.
- Infinite setting, thirteen blade iris diaphragm version available to reduce intensity while maintaining color temperature.

Power Supply Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power Consumption</td>
<td>190 Watts (nominal)</td>
</tr>
<tr>
<td>Output Voltage</td>
<td>0 - 21 VAC</td>
</tr>
<tr>
<td>Fiber Receptacle</td>
<td>.720 (13.3)</td>
</tr>
<tr>
<td>Input Voltage</td>
<td>115 VAC / 60 Hz</td>
</tr>
<tr>
<td></td>
<td>230 VAC / 50/60 Hz</td>
</tr>
<tr>
<td>Temperature Range</td>
<td>Operating</td>
</tr>
<tr>
<td></td>
<td>0° to 50°C</td>
</tr>
</tbody>
</table>

ACE® Remote Light Sources

<table>
<thead>
<tr>
<th>Voltage</th>
<th>Description</th>
<th>Code</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>115</td>
<td>EKE Lamp</td>
<td>A20560</td>
<td>A20570</td>
</tr>
<tr>
<td></td>
<td>A20560.1 EJA Lamp</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>A20560.2 DDL Lamp</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>EKE Lamp and Iris</td>
<td>A20580</td>
<td>A20590</td>
</tr>
<tr>
<td></td>
<td>A20580.1 EJA Lamp and Iris</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>A20580.2 DDL Lamp and Iris</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

ACE® Remote Power Supply

<table>
<thead>
<tr>
<th>Description</th>
<th>Code</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>115 V Power Supply Only</td>
<td>A20560.115</td>
<td></td>
</tr>
<tr>
<td>230 V Power Supply Only</td>
<td>A20570.230</td>
<td></td>
</tr>
</tbody>
</table>

Extension Cord

<table>
<thead>
<tr>
<th>Description</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>10’ extension - CE and CSA Comp.</td>
<td>A29505</td>
</tr>
</tbody>
</table>

EKE, DDL, and EJA lamps and Modulamp® units can be purchased separately.
ACE® Remote Light Source

Dimensions in ( ) are in mm

Modulamp®... SCHOTT Innovation! Two positions optimize light intensity output, depending on the lamp in use. Entire housing is interchangeable for quick setup.

Choice of Lamps.. SCHOTT Versatility! Three different bulbs (EJA, EKE, DDL) offer light intensity and color temperature options to maximize productivity and accuracy.

Solid State Dimmer...SCHOTT Control! Continuous intensity control for lamp life management.

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DCR® III Light Source

DC regulated light source provides intense, cool illumination.

Standard Features
- DC-regulated light source limits light fluctuation to ± 0.5% due to line voltage variation.
- Universal input voltage – accepts 90 to 265 VAC.
- Current limiting – protects the unit from over heating due to defective and aging bulbs.
- Transient protection – allows remote location of bulb.
- Lamp change indicator light – LED located on front panel changes from green to red when lamp should be replaced. This is due to either an open or partially shorted filament.
- Soft start “lamp saver” circuitry.
- IR interference filter for cool illumination.
- Solid state dimmer control for continuous dimming.
- Interchangeable Modulamp® Units offer 2 lamp positions to maximize individual lamp efficiencies.
- Choice of three, 150 watt halogen lamps - EJA, EKE and DDL for intense, uniform illumination.
- Can power the RS232 from the 9-pin connector.
- Built-in 9-pin connector for analog remote control or RS-232 connection.
- Detachable IEC cord.
- Quiet rear exhaust.
- CSA approved to UL spec, CE compliant.
- Stackable, with retractable handle.
- Low housing temp – slightly above ambient.
- 2-year warranty (excludes lamp and socket).
- Manufactured in the USA.

Options
- Rear baffle.
- Dimmer lock.
- Mechanical shutter.
- Wired, manual remote control and RS232 connection.
- Infinite setting, thirteen blade iris diaphragm version available to reduce intensity while maintaining color temperature.

Power Supply Specifications

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rated Power Output</td>
<td>150 Watts</td>
</tr>
<tr>
<td>Output Voltage</td>
<td>0.0, 0.5 to 20.5 VDC</td>
</tr>
<tr>
<td>Input Voltage Rating, 50/60 Hz.</td>
<td>90 to 265 VAC</td>
</tr>
<tr>
<td>Power Factor Correction @ 230 VAC, 50 Hz.</td>
<td>&gt; 0.99, &lt; 4°</td>
</tr>
<tr>
<td>Hold-up Time, Nominal AC Input, Full Load</td>
<td>8.3 milliseconds</td>
</tr>
<tr>
<td>Line Regulation, Over Entire Input Range</td>
<td>±0.5%</td>
</tr>
<tr>
<td>Current Limit Set Point</td>
<td>8.5 Amps</td>
</tr>
<tr>
<td>Temperature Range: Operating</td>
<td>0° to 45°C</td>
</tr>
<tr>
<td></td>
<td>Storage -25° to 85°C</td>
</tr>
<tr>
<td>Relative Humidity, Non-condensing</td>
<td>5% to 95%</td>
</tr>
</tbody>
</table>

EKE, DDL, and EJA lamps and Modulamp® units can be purchased separately.
DCR® III Plus Light Source

Dimensions in ( ) are in mm

Input: 115/230 VAC – 50/60 Hz, Output: 0–20.5 VDC

Modulamp®... SCHOTT Innovation! Two positions optimize light intensity output, depending on the lamp in use. Entire housing is interchangeable for quick setup.

Choice of Lamps... SCHOTT Versatility! Three different bulbs (EJA, EKE, DDL) offer light intensity and color temperature options to maximize productivity and accuracy.

Note: If the intensity control knob is turned to the R (Remote) position, lamp intensity control is switched to the rear 9-pin connector. Front panel intensity control will always override the remote intensity control.
DCR® III Plus Light Source

Includes all the standard features of the DCR® III in addition to a built-in RS232 interface providing intense, cool illumination via remote control.

Benefits

- Remote controllable using built-in integrated RS232 interface.
- Designed to control up to three additional DCR® III units via a built-in 15-pin connector. Expansion cable and DCR® III light sources sold separately.
- Automatically restores user settings on power up.
- Enhanced communications available by embedding error checking codes in command strings.
- Easier programmability with simplified command structure.

Standard Features

- DC-regulated light source limits light fluctuation due to line voltage variation up to ±0.5%.
- Current limiting circuitry protects the unit from over heating due to defective and aging bulbs.
- Lamp indicator light (LED) located on front panel changes color from green to red when lamp requires replacement. Lamp status output on RS232 is available.
- Solid state intensity control adjusts from 0 to 100% light output.
- Interchangeable Modulamp® units offer 2 lamp positions to maximize individual lamp efficiencies.
- Soft start “lamp saver” circuitry.
- IR interference filter for cool illumination.
- CSA certified to UL, CE compliant to low voltage and EMC directives.
- Universal input voltage – accepts 90 to 265 VAC, 50/60 Hz.
- Stackable, with retractable handle and detachable cord.
- 2-year warranty (excludes lamp and socket).
- Manufactured in the USA.

Power Supply Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rated Power Output</td>
<td>150 Watts</td>
</tr>
<tr>
<td>Output Voltage</td>
<td>0.0 to 20.5 VDC</td>
</tr>
<tr>
<td>Input Voltage Rating, 50/60 Hz.</td>
<td>90 to 265 VAC</td>
</tr>
<tr>
<td>Power Factor Correction @ 230 VAC, 50 Hz.</td>
<td>&gt; 0.99, &lt; 4°</td>
</tr>
<tr>
<td>Hold-up Time, Nominal AC Input, Full Load</td>
<td>8.3 milliseconds</td>
</tr>
<tr>
<td>Line Regulation, Over Entire Input Range</td>
<td>±0.5%</td>
</tr>
<tr>
<td>Current Limit Set Point</td>
<td>8.5 Amps</td>
</tr>
<tr>
<td>Temperature Range: Operating</td>
<td>0° to 45°C</td>
</tr>
<tr>
<td></td>
<td>-25° to 85°C</td>
</tr>
<tr>
<td>Relative Humidity, Non-condensing</td>
<td>5% to 95%</td>
</tr>
</tbody>
</table>

EKE, DDL, and EJA lamps and Modulamp® units can be purchased separately.
Modulamp®... SCHOTT Innovation! Two positions optimize light intensity output, depending on the lamp in use. Entire housing is interchangeable for quick setup.

Choice of Lamps... SCHOTT Versatility! Three different bulbs (EJA, EKE, DDL) offer light intensity and color temperature options to maximize productivity and accuracy.

Note: If the intensity control knob is turned to the R (Remote) position, lamp intensity control is switched to the RS232 interface. Front panel intensity control will always override the remote intensity control. Remote control of attached DCR IIIs is dependent on each individual unit’s setting, which should be in R (Remote) position for remote control.
DCR® IV Light Source

DC regulated light source with integrated Equalizer™ light feedback to provide stabilized light output for the most demanding machine vision inspection applications. (See DCR® III Plus datasheet for base description.)

Benefits
- Stable lamp output over the life of the lamp and minimized lamp to lamp variation.
- Remote controllable using integrated RS232 interface.

Standard Features
- **Flexible** - Two configurations available:
  A. DCR® IV used with a reference Modulamp® unit and off-the-shelf fiber optics, maintains DDL lamp output at ±2% over the life of the lamp and ±8% lamp to lamp.
  B. For even greater control, use the DCR® IV with fiber optic products that have an integrated reference bundle; special order only. This will maintain DDL lamp output and lamp to lamp variation within ±1%.
- All of the features of the DCR® III Plus Light Source including control of up to three additional DCR® III light sources via an expansion cable.
- LED’s located on the front panel indicate that the lamp intensity is stabilized.
- Easy to use front panel controls for calibration and intensity control.
- CSA certified to UL, CE compliant to low voltage and EMC directives.
- Universal input voltage – accepts 90 to 265 VAC, 50/60 Hz.
- Stackable, with retractable handle and detachable cord.
- 2-year warranty (excludes lamp and socket).
- Manufactured in the USA.

**Performance Specifications**
- Light Output with Reference Modulamp Unit: ±2%
- Light Output with Independent Reference Bundle: ±1%
- Lamp to Lamp Variation with Reference Modulamp Unit: ±8%
- Lamp to Lamp Variation with Independent Reference Bundle: ±1%

**Power Supply Specifications**
- Rated Power Output: 150 Watts
- Output Voltage: 0.0, 0.5 to 20.5 VDC
- Input Voltage Rating, 50/60 Hz: 90 to 265 VAC
- Power Factor Correction @ 230 VAC, 50 Hz: > 0.99, < 4°
- Hold-up Time, Nominal AC Input, Full Load: 8.3 milliseconds
- Line Regulation, Over Entire Input Range: ±0.5%
- Lamp Type: DDL, Ushio or GE, 150 W Halogen Bulb
- Current Limit Set Point: 8.5 Amps
- Temperature Range: Operating 0° to 45°C
- Storage -25° to 85°C
- Relative Humidity, Non-condensing: 5% to 95%
DDL lamp is offered as the standard lamp for this unit.

Note: If the intensity control knob is turned to the R (Remote) position, lamp intensity control is switched to the RS232 interface. Front panel intensity control will always override the remote intensity control. Remote control of attached DCR IIIs is dependent on each individual unit's setting, which should be in R (Remote) position for remote control.

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MHR®-50 Light Source

Compact metal halide regulated light source for applications that require bright, white light.

Standard Features

■ Color temperature of 6000K.
■ Twice the light output of DDL lamps.
■ Bulb lifetime of 3500 hours average at 50W output.
■ Metal halide lamp specifically designed with highest uniformity.
■ Solid state dimmer control.
■ Heavy duty, grounded metal housing.
■ Universal input voltage - accepts 90 to 265 VAC.
■ IR interference filter for cool illumination.
■ Full illumination on .50 active diameter input.
■ Soft start “lamp saver” circuitry.
■ Built-in 9-pin connector for analog remote control.
■ Built-in thermal shut down.
■ Quiet rear exhaust.
■ Infinite setting, thirteen blade iris diaphragm to reduce intensity while maintaining the color temperature.
■ Stackable with retractable handle.
■ Low housing temp - slightly above ambient.
■ Detachable IEC cord.
■ CSA approved to UL spec, CE compliant.
■ 2-year warranty (excludes lamp and socket).
■ Manufactured in the USA.

Benefits

■ More light output than Halogen Lamps with similar lifetimes.
■ Extremely high light output available at shorter lifetimes.
■ Extremely high uniformity.

MHR®-50 Light Source Models

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A20900</td>
<td>MHR-50 with 50W Lamp</td>
</tr>
<tr>
<td>A20901</td>
<td>Replacement 50W Lamp</td>
</tr>
</tbody>
</table>

Power Supply Specifications

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Rated Power Output</td>
<td>40 to 60 Watts</td>
</tr>
<tr>
<td>Output Current @ 50V</td>
<td>0.8A to 1.3A</td>
</tr>
<tr>
<td>Input Voltage Rating, 50/60 Hz.</td>
<td>90 to 265 VAC</td>
</tr>
<tr>
<td>Input Surge Current (cold start)</td>
<td>Less than 37A</td>
</tr>
<tr>
<td>Input Frequency</td>
<td>47 - 63 Hz</td>
</tr>
<tr>
<td>Hold-Up Time, nominal AC input, full load</td>
<td>500 ms</td>
</tr>
<tr>
<td>Efficiency, nominal AC line, full power</td>
<td>72 - 85% typ.</td>
</tr>
<tr>
<td>Temperature Range: Operating</td>
<td>0° to 45°C</td>
</tr>
<tr>
<td>Storage</td>
<td>-25° to 85°C</td>
</tr>
<tr>
<td>Relative Humidity, non-condensing</td>
<td>5% to 95%</td>
</tr>
<tr>
<td>Light intensity PARD (Periodic and Random Deviation) - Better than 80 dB down</td>
<td></td>
</tr>
</tbody>
</table>
MHR®-50 Light Source

Dimensions in ( ) are in mm

Lamp Output, without filters

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www.us.schott.com/fiberoptics
Diffuse Dome

For use with 4” Fiber Optic Ringlight A08700

Standard Features

- Eliminates specular glints and/or shadows on reflective parts
- Used in conjunction with 4” diameter ringlight A08700
- 4.9” (124 mm) diameter x 2.70” (69 mm) height (without ringlight)
- Viewing aperture: 0.98 (25 mm)

Typical Applications

- Data matrix code reading
- OCR/OCV
- Semiconductor wafer inspection
- Foil inspection
- Can inspection

Dimensions in [ ] are mm. All other dimensions are inches.