**Miniature Day/Night Exchanger**

![Image](image_url)

**Fig 1. CCS-EXM-IRC21 (left), M12-EXM-IRC21 (right)**

**Description**
The M12-EXM-IRC21 and CCS-EXM-IRC21 are IR cut-off filter exchangers that allow true day/night (TDN) operation with the Pixim DPS chipsets. For daytime operation an absorptive color filter provides true color rendition. At night, an AR coated window allows maximum light transmission.

**Key Features**
- Maximum light transmission in low-light conditions
- True color rendition during the day
- Designed specifically to fit the Pixim DPS chipsets
- Absorptive filter optimized for best color
- Latching solenoid requires power only to switch

**Applications**
- Security and surveillance camera

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**Key Specifications**

<table>
<thead>
<tr>
<th>Description</th>
<th>IR cut filter exchanger</th>
</tr>
</thead>
<tbody>
<tr>
<td>Latching Solenoid</td>
<td>Power required only to switch; see specs</td>
</tr>
<tr>
<td>Switch signal</td>
<td>±3.3V 100ms</td>
</tr>
<tr>
<td>Integrated Lens Mount</td>
<td>M12-EXM-IRC21: M12x0.5</td>
</tr>
<tr>
<td></td>
<td>CCS-EXM-IRC21: None</td>
</tr>
<tr>
<td>Day Operation</td>
<td>IR cut filter, IRC21</td>
</tr>
<tr>
<td>Night Operation</td>
<td>AR coated window</td>
</tr>
<tr>
<td>Operational Mode</td>
<td>Standard Mode +red, -black. Reverse anode/cathode to reverse mode. Day mode: IRC21, Night mode: window</td>
</tr>
<tr>
<td>Min nominal BFL</td>
<td>~5mm (M12-EXM Only)</td>
</tr>
</tbody>
</table>

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**Low-Light Image Comparison**

![Image](image_url)

With Day/Night Exchanger

![Image](image_url)

Without Day/Night Exchanger
M12-EXM-IRC21
Electrical and Mechanical Specifications (mm):

Note:
1. Holder and vane Material: PC(Black)
2. Electric specification:
   - Rating voltage: 3.0DCV
   - Power consumption: 0.81W at 3.0DCV
   - Work voltage: 2.5 to 3.5DCV (3.0V-3.3V Recommended)
   - Rating current: 270mA
   - DC resistance: 110HM + 5% at 20 degree
   - Insulation resistance: 50M OHM min at 500V
   - Resist voltage: 250V AC 1 Minute
   - Work temperature: -10 to +40
   - Lifetime: 50000 times min
3. Standard 2-pin connector with >70mm wire
4. Reverse anode/cathode for operation
5. Work mode:
   - Night mode: filter C-K9(1.2mm thickness)
   - Day mode: filter QB21(1.2mm thickness)
CCS-EXM-IRC21
Electrical and Mechanical Specifications (mm):

Note:
1. Holder and vane Material: PC(Black)
2. Electric specification:
   - Rating voltage: 3.0 DCV
   - Power consumption: 0.81 W at 3.0 DCV
   - Work voltage: 2.5 to 3.5 DCV (3.0V-3.3V Recommended)
   - Rating current: 270 mA
   - DC resistance: 11 OHM ± 5% at 20 degree
   - Insulation resistance: 50 M OHM min at 500V
   - Resist voltage: 250V AC 1 Minute
   - Work temperature: -10 to +40
   - Lifetime: 30000 times min
3. Standard 2-pin connector with >70mm wire
4. Reverse anode/cathode for operation
5. Work mode:
   - Night mode: filter C-K9(1.2mm thickness)
   - Day mode: filter QB21(1.2mm thickness)

SUBJECT TO CHANGE WITHOUT NOTICE

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