# Harness the power of reflected light.

**3M™ Solar Light Redirecting Films**

3M™ Solar Light Redirecting Films are microstructured reflective mirror films. When placed over the cell tabbing ribbons, they are designed to reflect light off the front glass and onto the cells – helping to increase the output of the module.

- Typical power increase of 1.5–2.0% compared to module without 3M Solar Light Redirecting Film
- Additional power increase may be obtained by using wider tabbing ribbons
- Integrated Ethylene Vinyl Acetate (EVA) adhesive
- Can be applied manually or by using automated tabber and stringer equipment

## Durability testing: Accelerated and ambient test results

<table>
<thead>
<tr>
<th>Test method</th>
<th>Conditions</th>
<th>Exposure</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Damp heat</td>
<td>85°C, 85% RH (IEC 61215)</td>
<td>3000 hrs</td>
<td>Passed, no observed degradation</td>
</tr>
<tr>
<td>Thermal cycling</td>
<td>85°C → -40°C (IEC 61215)</td>
<td>50 &amp; 200</td>
<td>Passed</td>
</tr>
<tr>
<td>Pressure cooker</td>
<td>120°C, 100 %RH, 2 atm</td>
<td>350 hrs</td>
<td>No observed degradation</td>
</tr>
<tr>
<td>Humidity freeze</td>
<td>85°C, 85% RH → -40°C (IEC 61215)</td>
<td>10 cycles</td>
<td>Passed, no observed degradation</td>
</tr>
<tr>
<td>UV exposure</td>
<td>3X sun intensity at 40°C dry (ASTM G155)</td>
<td>115 hrs</td>
<td>Passed, no observed degradation</td>
</tr>
<tr>
<td>Outdoor weathering</td>
<td>Minnesota, Arizona, Florida</td>
<td>Since Nov. 2012 – Jan. 2013</td>
<td>No observed degradation</td>
</tr>
</tbody>
</table>

---

**How does it work?**

![Diagram showing how 3M™ Solar Light Redirecting Films work](chart.png)

- Exposed tabbing ribbon: ~10% of light redirected to cell
- 3M™ Solar Light Redirecting Film over tabbing ribbon: ~70% more light redirected to cells

---

3M is a trademark of 3M. Used under license by 3M subsidiaries and affiliates.

Renewable Energy Division
3M Center, Building 235-1S-67
St. Paul, MN 55144-1000
800 755 2654
3M.com/solar

98-0150-1092-3