SURFACE-MOUNT OPTOCOUPLER PACKAGES
Vishay Semiconductors offers the industry's broadest selection of surface-mount optocoupler package options, giving designers a choice of nine small outline packages and 12 gullwing SMD DIP packages. All Vishay Semiconductors optocouplers are lead (Pb)-free.

**SOP-4, SOP-8, and SOP-16 (half-pitch Miniflat):** With a profile of only 2.0 mm, devices in the SOP family are the smallest surface-mount optocouplers offered by Vishay, saving as much as 63% board space compared with equivalent devices in the DIP SMD. Available in single- and multi-channel versions.

**SOP-4, SOP-5, and SOP-8 (full-pitch Miniflat):** These 2.0-mm thick packages offer significant PCB real estate savings compared with DIP SMD counterparts—the SOP-4 and SOP-5 are 32% smaller, while the SOP-8 is 35% smaller.

**SOP-5L and SOP-4L (wide body Miniflat):** This package meets the VDE's longer creepage and clearance distance requirements while maintaining a very low 2.0-mm profile. Available in 4- or 5-pin versions.

**SOIC-8:** Available in both single and dual channels, the solder footprint is 35% smaller than an equivalent DIP-8 SMD optocoupler.

**SOT-223/10:** This 10-pin quad channel optocoupler requires a mere 47.6 mm² of PCB space. With Vishay's advanced packaging and wafer processing technology, it enables the industry's thinnest and most condensed quad channel.

**Option 7 DIP-4/6/8/16:** Provides a standard SMD gullwing lead form with a maximum standoff height of 0.9 mm; available in 4-, 6-, 8-, and 16-pin versions.

**Option 8 DIP-4/6/8/16:** Provides a wide SMD gullwing lead form with a maximum standoff height of 0.5 mm and the longer clearance distance required by VDE; available in 4-, 6-, 8-, and 16-pin versions.

**Option 9 DIP-4/6/8/16:** Provides a standard SMD gullwing lead form with a maximum standoff height of 0.25 mm, slightly lower than option 7; available with 4-, 6-, 8-, and 16-pin versions.

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**PCB Area per Channel (mm²):**

- SOP-8 100 mil (33.7 mm²)
- SOP-4 100 mil (33.7 mm²)
- SOP-8 254 mil (33.1 mm²)
- SOP-5L/4L (43.1 mm²)
- DIP-4/6/8/16 (≥ 50.0 mm²)
- SOIC-8 (single) (36.6 mm²)
- SOIC-8 (dual) (18.0 mm²)
- SOP-16 (19.0 mm²)
- SOP-4/5 (21.3 mm²)
- SOT-223/10 (11.9 mm²)
## Optocoupler Packages

### Surface-Mount

<table>
<thead>
<tr>
<th>Package Type</th>
<th>Safety Agency Approvals</th>
</tr>
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<tbody>
<tr>
<td><strong>Package Type</strong></td>
<td>UL</td>
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<tr>
<td>SOP-4, SOP-5 Miniflat 100 mil pitch</td>
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<tr>
<td>SOP-8, Miniflat 100 mil pitch</td>
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<tr>
<td>SOP-4, Miniflat</td>
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<tr>
<td>SOP-8, Miniflat</td>
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<tr>
<td>SOP-16, Miniflat</td>
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<tr>
<td>SOP-4L, Wide Body Miniflat</td>
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<tr>
<td>SOP-5L, Wide Body Miniflat</td>
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<tr>
<td>SOIC-8</td>
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<tr>
<td>SOIC-223/10</td>
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<tr>
<td>DIP with Option 7, 8, 9</td>
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### Dimensions

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<thead>
<tr>
<th>Package Type</th>
<th>A (length)</th>
<th>B (width)</th>
<th>C (pitch)</th>
<th>D (standoff)</th>
<th>E (standoff)</th>
<th>F (clearance)</th>
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<tbody>
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<td>SOP-4, SOP-5</td>
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<td>SOT-223/10</td>
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- Tape and reel specifications
- Application notes
- Safety agency certificates
- Recommended solder foot pads
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ASIA
SINGAPORE
VISHAY INTERTECHNOLOGY ASIA PTE LTD.
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JAPAN
VISHAY JAPAN CO., LTD.
SHIBUYA PRESTIGE BLDG. 4F
3-12-22, SHIBUYA
SHIBUYA-KU
TOKYO 150-0002
JAPAN
PH: +81-3-5466-7150
FAX: +81-3-5466-7160

EUROPE
GERMANY
VISHAY ELECTRONIC GMBH
GEHEIMRAT-ROSENTHAL-STR. 100
95100 SELB
GERMANY
PH: +49-9287-71-0
FAX: +49-9287-70435

FRANCE
VISHAY S.A.
199, BLVD DE LA MADELEINE
06003 NICE, CEDEX 1
FRANCE
PH: +33-4-9337-2727
FAX: +33-4-9337-2726

UNITED KINGDOM
VISHAY LTD.
SUITE 6C, TOWER HOUSE
ST. CATHERINE’S COURT
SUDDERLAND ENTERPRISE PARK
SUDDERLAND SR5 3XJ
UNITED KINGDOM
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