

## ■ Absolute Maximum Ratings (Ta = 25°C)

| Item   |                                     | Symbol                | Rating      | Unit             | Measurement Conditions        |
|--|-------------------------------------|-----------------------|-------------|------------------|-------------------------------|
| Input  | LED forward current                 | I <sub>F</sub>        | 50          | mA               |                               |
|  | Repetitive peak LED forward current | I <sub>FP</sub>       | 1           | A                | 100 μs pulses, 100 pps        |
|  | LED forward current reduction rate  | Δ I <sub>F</sub> /°C  | -0.5        | mA/°C            | Ta ≥ 25°C                     |
|  | LED reverse voltage                 | V <sub>R</sub>        | 5           | V                |                               |
|  | Connection temperature              | T <sub>j</sub>        | 125         | °C               |                               |
| Output   | Output dielectric strength          | V <sub>OFF</sub>      | 350         | V                |                               |
|  | Continuous load current             | I <sub>O</sub>        | 120 (100)   | mA               |                               |
|  | ON current reduction rate           | Δ I <sub>ON</sub> /°C | -1.2 (-1)   | mA/°C            | Ta ≥ 25°C                     |
|  | Connection temperature              | T <sub>j</sub>        | 125         | °C               |                               |
| Dielectric strength between input and output (See note 1.) |                                     | V <sub>I-O</sub>      | 2,500       | V <sub>rms</sub> | AC for 1 min                  |
| Operating temperature                                      |                                     | T <sub>a</sub>        | -40 to +85  | °C               | With no icing or condensation |
| Storage temperature  |                                     | T <sub>stg</sub>      | -55 to +125 | °C               | With no icing or condensation |
| Soldering temperature (10 s)                               |                                     | ---                   | 260         | °C               | 10 s                          |

Values in parentheses are for the G3VM-355C/F.

## ■ Electrical Characteristics (Ta = 25°C)

| Item                           | Symbol                                 | Minimum           | Typical          | Maximum | Unit   | Measurement conditions  |
|--------------------------------|--|-------------------|------------------|---------|--------|---|
| Input                          | LED forward voltage                    | V <sub>F</sub>    | 1.0              | 1.15    | 1.3    | V   |
|                                | Reverse current                        | I <sub>R</sub>    | ---              | ---     | 10     | μA  |
|                                | Capacity between terminals             | C <sub>T</sub>    | ---              | 30      | ---    | pF  |
|                                | Trigger LED forward current            | I <sub>FT</sub>   | ---              | 1       | 3      | mA  |
| Output                         | Maximum resistance with output ON      | R <sub>ON</sub>   | 15 (40)          | 25 (50) | Ω      | SPST-NO: I <sub>F</sub> = 5 mA,<br>I <sub>O</sub> = 120 mA (100 mA) |
|                                |  |                   |                  |         |        | SPST-NC: I <sub>OFF</sub> = 10 μA                                   |
|                                | Current leakage when the relay is open | I <sub>LEAK</sub> | ---              | ---     | 1.0    | μA  |
| Capacity between I/O terminals |  | C <sub>I-O</sub>  | ---              | 0.8     | ---    | pF  |
| Insulation resistance          |  | R <sub>I-O</sub>  | 1,000            | ---     | ---    | MΩ  |
| Turn-ON time                   |  | SPST-NO           | t <sub>ON</sub>  | ---     | (0.3)  | 1.0   |
|                                |  | SPST-NC           | ---              | ---     | (0.25) | 1.0   |
| Turn-OFF time                  |  | SPST-NO           | t <sub>OFF</sub> | ---     | (0.15) | 1.0   |
|                                |  | SPST-NC           | ---              | ---     | (0.5)  | 3.0 (1)   |

Values in parentheses are for the G3VM-355C/F.

## ■ Recommended Operating Conditions

Use the G3VM under the following conditions so that the Relay will operate properly.

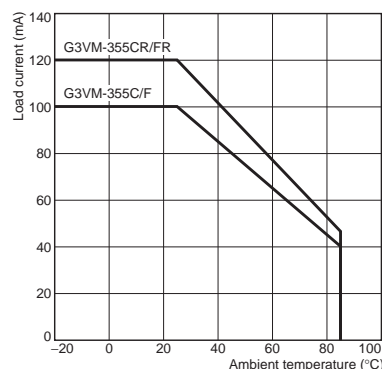
| Item                          | Symbol          | Minimum | Typical | Maximum   | Unit |
|-------------------------------|-----------------|---------|---------|-----------|------|
| Output dielectric strength    | V <sub>DD</sub> | ---     | ---     | 280       | V    |
| Operating LED forward current | I <sub>F</sub>  | 5       | ---     | 25        | mA   |
| Continuous load current       | I <sub>O</sub>  | ---     | ---     | 120 (100) | mA   |
| Operating temperature         | T <sub>a</sub>  | -20     | ---     | 65        | °C   |

Values in parentheses are for the G3VM-355C/F.

## ■ Engineering Data

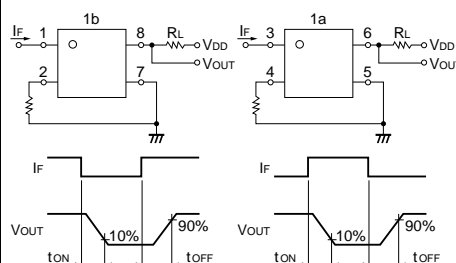
### Load Current vs. Ambient Temperature

G3VM-355C(F)  
G3VM-355CR/FR



**Note:** 1. The dielectric strength between the input and output was checked by applying voltage between all pins as a group on the LED side and all pins as a group on the light-receiving side.

**Note:** 2. Turn-ON and Turn-OFF Times



## ■ Safety Precautions

Refer to "Common Precautions" for all G3VM models.