

**Safety Standard Certificate for Photocoupler**

**PS2533, PS2561, PS2561A, PS2561B,  
PS2561D, PS2562, PS2565, PS2571,  
PS2581L, PS2581AL**

● **FIMKO Certificate**

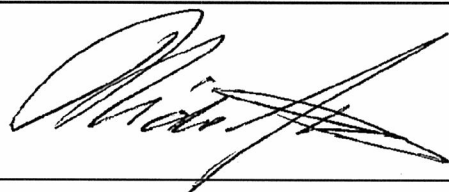
Standard            EN 60065, EN 60950

Reference No.    FI 26198

This certification is approved as Renesas Electronics Corporation, but NEC logo is kept on the PKG marking and the label indication on the smallest packing for the time being.

Please contact sales agent or Renesas Electronics sales, regarding the date of change to Renesas Electronics indication.

本認定書はルネサスエレクトロニクス社にて取得していますが、当面 製品捺印及び最小梱包のラベル表示は旧NECロゴにて出荷致します。  
尚、実施時期については別途お問合せ下さい。



H.TAKAHASHI

Group Manager  
Optical Device Engineering  
Technical Marketing Department  
Compound Semiconductor Devices Business Division  
Analog & Power Devices Business Unit  
Renesas Electronics Corporation

**September 10, 2010**



# CERTIFICATE FI 26198

Our Ref. 261055-6

**Product** Optocoupler  
**Type** PS25\*\*\*\*-\*  
**Trade mark** Renesas  
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**Certificate Holder** Renesas Electronics Corporation  
 Compound Semiconductor Devices Quality Assurance Department  
 1753 Shimonumabe, Nakahara-ku, Kawasaki, Kanagawa, 211-8668, JAPAN  
**Manufacturer** Renesas Electronics Corporation  
 Compound Semiconductor Devices Quality Assurance Department  
 1753 Shimonumabe, Nakahara-ku, Kawasaki, Kanagawa, 211-8668, JAPAN  
**Technical information** --  
**Other information** Basic, supplementary, double or reinforced insulation.  
 Alternative designs:  
 PS25...-.: L: For SMD-mounting, L1: With wider distance between leads,  
 L2: For SMD-mounting with wider distance between leads.  
 PS25...-: 1: One channel, 4: Four channel.

**The product is certified according to the following standard(s)** EN 60065:2002 + A1:2006 + A11:2008  
 EN 60950-1:2006 + A11:2009 + A1:2010

**Validity** This certificate is valid until 31 August 2015 unless the standard in question has been amended or superseded with significant changes in requirements, in which case, SGS Fimko has the right to shorten the validity of the certificate based on the legislation of the European Union. This certificate includes the right to use the FI mark under the condition that changes (if any) will be checked at SGS Fimko before the product is brought onto market and that the conditions for FI certification are met.

**Date of issue** 31 August 2010

**SGS Fimko Ltd**

**Signature**



Matti Huttunen  
 Certification Engineer



This certificate has 1 appendix



This certificate is issued by the company under its General Conditions for Certification Services accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm). Attention is drawn to the limitations of liability defined therein and in the Test Report here above mentioned which findings are reflected in this certificate. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

**Manufacturing sites**

Kyushu Denshi Co., Ltd.  
89 Nagasaki, Shiranui-machi, Uki-shi, Kumamoto 869-0562, JAPAN

Microwave & Optical Semiconductors Taiwan Co., Ltd.  
587, Gao Shu Road, Gao Shan Li, Yangmei, Taoyuan, TAIWAN

**Additional information**

The product has certificate 1017620 issued by Intertek Semko AB in accordance with the Certification Service system.

Following types are included:

PS2532-1, PS2532L-1  
PS2533-1, PS2533L-1  
PS2561-1, PS2561L-1, PS2561L1-1, PS2561L2-1  
PS2561A-1, PS2561AL-1, PS2561AL1-1, PS2561AL2-1  
PS2561B-1, PS2561BL-1, PS2561BL1-1, PS2561BL2-1  
PS2561D-1, PS2561DL-1, PS2561DL1-1, PS2561DL2-1  
PS2562-1, PS2562L-1, PS2562L1-1, PS2562L2-1  
PS2565-1, PS2565L-1, PS2565L1-1, PS2565L2-1  
PS2566-1, PS2566L-1, PS2566L1-1, PS2566L2-1  
PS2571-1, PS2571-4, PS2571L-1, PS2571L-4  
PS2581L1, PS2581L2  
PS2581AL1, PS2581AL2

Note The one channel samples of PS25.. are marked 25...

For a RMS working voltage up to 250V, pollution degree 2 and material group IIIa or IIIb.

Type PS2561B\*-1 and PS2561D\*-1: Max operating temperature 110°C.  
All other types: Max operating temperature 100°C.

The following tests have been performed with positive result:

**General**

- Creepage distance between input and output: Type PS2561DL1-1, PS2561DL2-1, PS2581L1, PS2581L2, PS2581AL1, PS2581AL2: >8mm, All other types: >7mm.
- Distance through insulation: >0.4mm.
- Internal creepage distance not measured, tests according to EN 60950 cl. 2.10.11 have been performed with positive result.
- Humidity test: 48h in 93% relative humidity. Electric strength test 3000V/1min.

**Special tests according to EN 60950**

- Thermal cycling test. 10 cycles. Each cycle: 68h in 100°C, (for type PS2561B..-1 and PS2561D..-1: 110°C), 1h in 25°C, 2h in 0°C and 1h in 25°C. After the cycling test a humidity test for 48h in 93% relative humidity. Electric strength test between input and output 5000V/1 minute.

After judgement from case to case, the optocoupler can bridge basic, supplementary, double or reinforced insulation, provided that the ratings in data sheet are not exceeded in normal operation or under fault conditions in the appliance.

This certificate replaces certificate no. FI 25119 A2 dated 26 October 2009 due to changed of the name of certificate holder and manufacturer and updated standard.

**Our ref.**

261055-6