

# DEMKO CERTIFICATE

<b>Certificate No.</b>	D-06327-A8
<b>Page</b>	1/5
<b>Date of Issue</b>	2022-04-21
<b>Certificate Holder</b>	TDK-LAMBDA CORP NAGAOKA TECHNICAL CENTER R&D DIV 2704-1 SETTAYA-MACHI NAGAOKA-SHI, NIIGATA, 940-1195 JAPAN
<b>Manufacturer</b>	TDK-LAMBDA CORP NAGAOKA TECHNICAL CENTER R&D DIV 2704-1 SETTAYA-MACHI NAGAOKA-SHI, NIIGATA, 940-1195 JAPAN
<b>Production site</b>	TDK-LAMBDA (CHINA) ELECTRONICS CO LTD NO.95, ZHUJIANG RD, XINWU DISTRICT WUXI JIANGSU 214028 CHINA
<b>Certified Product</b>	See Page 2 for additional information
<b>Model</b>	Switching Power Supply ZWS150BAF-24/FU, ZWS150BAF-abcdefghijkl See page 2 for additional Information
<b>Trademark</b>	<b><i>TDK·Lambda</i></b>
<b>Ratings</b>	Input: Model ZWS150BAF-3bcdefghij: 100-240 Vac, 50/60 Hz, 1.4A See page 2 and 3 for additional ratings.
<b>Tested according to</b>	EN 62368-1:2014, EN 62368-1:2014/A11:2017
<b>Test Report No.</b>	E122103-A6230-CB-1 issued on 2022-04-11
<b>Additional</b>	The report was revised to include technical modification. Additionally investigated to EN 50178:1997. See page 3 for additional information.
<b>Expire date</b>	2023-01-06

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**Certification Manager**  
Jan-Erik Storgaard

This is to certify that representative sample(s) of the Product described herein ("Certified Product") have been investigated and found in compliance with the Standard(s) indicated on this Certificate, in accordance with the D-Mark Requirements. As specified in the respective appendix below the Designated Certificate holder is entitled to use the D-Mark, or its alternative for cables, for the Certified Product manufactured at the production site(s) identified above, in accordance with the D-Mark Service Agreement, including without limitation the D-Mark Testing and Certification Services Service Terms. Only those Products bearing the D-Mark should be considered as being covered by UL's D-Mark Service. This Certificate shall remain valid through the expiration date, unless terminated earlier in accordance with the Service Agreement including without limitation if the Standard identified on this Certificate is amended or withdrawn prior the expiration date.

**Certification Body**

UL International Demko A/S, Borupvang 5A, DK-2750  
Ballerup, Denmark, Tel. +45 44 85 65 65,  
info.dk@ul.com  
www.UL.com



# Appendix DEMKO CERTIFICATE

**Certificate No.** D-06327-A8

**Page** 2/5

**Date of Issue** 2022-04-21

## Factories:

TDK-LAMBDA MALAYSIA SDN BHD  
PLO33 KAWASAN PERINDUSTRIAN SENAI 81400 SENAI JOHOR  
MALAYSIA

TDK-LAMBDA MALAYSIA SDN BHD  
LOT 2 & 3, BATU 9 ¾ KAWASAN PERINDUSTRIAN  
BANDAR BARU JAYA GADING 26070 KUANTAN PAHANG  
MALAYSIA

TDK-LAMBDA CORP  
2704-1 SETTAYA-MACHI NAGAOKA-SHI NIIGATA-KEN 940-1195  
JAPAN

ZHANGJIAGANG HUA YANG ELECTRONICS CO LTD  
NO.15 TONGXIN RD, ZHAOFENG ECONOMIC DEVELOPMENT ZONE, LEYU TOWN  
ZHANGJIAGANG JIANGSU 215622  
CHINA

ALPS LOGISTICS FACILITIES CO LTD  
593-1 NISHIOHASHI TSUKUBA-SHI IBARAKI-KEN 305-0831  
JAPAN

YOKOTE SEIKO CO., LTD.  
1-71 ARAYATORIKIMACHI AKITA-SHI AKITA 010-1633  
JAPAN

## Additional Model(s):

**Series:** ZWS150BAF-abcdefghijkl

a = 3, 5, 12, 15, 24 or 48

b = "/" or blank

c = "R" or blank

d = "A", "L" or blank

e = "CO2" or blank

f = "FG" or blank

g = "FV" or blank

h = "FGM" or blank

i = "SN" or blank

j = "N" or blank

## Ratings:

Input:

Model ZWS150BAF-3bcdefghij: 100-240 Vac, 50/60 Hz, 1.4A

Models ZWS150BAF-5bcdefghij, -12bcdefghij, -15bcdefghij, -24bcdefghij, -48bcdefghij and ZWS150BAF-24/FU:

100-240 Vac, 50/60 Hz, 2.0A

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**Certificate No.** D-06327-A8  
**Page** 3/5  
**Date of Issue** 2022-04-21

## Output:

3.3 Vdc, 30A: ZWS150BAF-3bcdefghij (DC 2.64 - 3.63 V, max 30A, max 99.0W)  
5 Vdc, 30A: ZWS150BAF-5bcdefghij (DC 4.0 - 5.5 V, max 30A, max 150W)  
12 Vdc, 12.5A: ZWS150BAF-12bcdefghij (DC 9.6 - 13.2 V, max 12.5A, max 150W)  
15 Vdc, 10A: ZWS150BAF-15bcdefghij (DC 12.0 - 16.5 V, max 10A, max 150W)  
24 Vdc, 6.3A: ZWS150BAF-24bcdefghij and ZWS150BAF-24/FU (DC 19.2 - 26.4 V, max 6.3A, max 151.2W)  
48 Vdc, 3.2A: ZWS150BAF-48bcdefghij (DC 38.4 - 52.8 V, max 3.2A, max 153.6W)  
Class I, IPX0, for building-in.

## Additional Information:

This Certificate replaces earlier issued certificate No. D-06327-A7 dated 2022-01-25 due to:

- Addition of Bleeder resistor/ R101, R102, R103 (Alternate), KOA Corporation, RK73H2BRT+2203F (+ = one, two, or three letters which denotes shipping specification).
- Addition of alternate Y-capacitor / C2, C3, TDK Corporation, CD (miniature series).
- Addition of Model Suffix "j".
- Update of Ratings information.

the changes do not affect the evaluation result of EN 50178.

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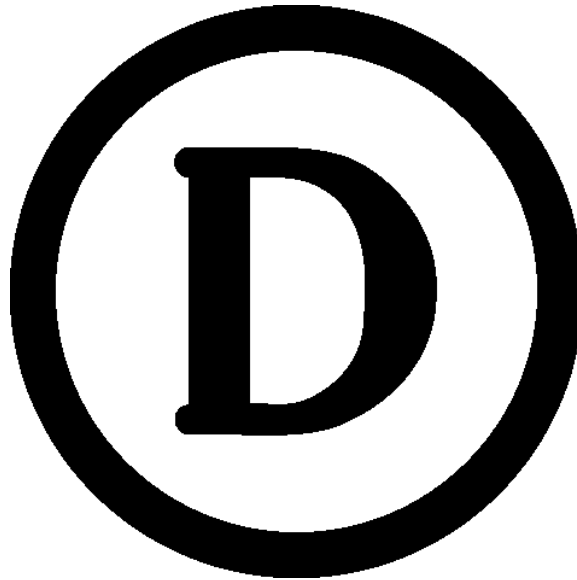
**Certificate No.** D-06327-A8

**Page** 4/5

**Date of Issue** 2022-04-21

## **Certification Mark D-Mark**

The D-Mark, as displayed below, shall appear on certified products only. Except as specified below the Mark shall be legible and no Minimum size is specified.



The size of the Mark may be reduced or enlarged on the condition that it remains readable and that the proportions of width and height are kept. The use of dark text for the D-Mark on light backgrounds and light text on dark backgrounds is permitted.

The D-Mark may appear on a label, nameplate, or may be cast, stamped or molded into the product. When appearing on a label or nameplate, the Manufacturer's name or trademark along with a model number are also required on that same label or nameplate. If cast, stamped or molded, the Certificate Manufacturer's name or trademark and model number shall also appear elsewhere on the product

When putting the product on the EU market, the manufacturer's name, trademark or mark of origin must be affixed in a clearly visible location and position on the product, on the package and in the user manual. It can be affixed by label, be directly imprinted, or cast or molded into the product.

Where the size of the product does not allow the Mark, the manufacturer's name, trademark, mark of origin and model number to be legible, and appearance on a label is not desired, it is allowed to cast, stamp or mold the Mark into the product, in a size which is not visible to the naked eye, provided the legible Mark, the manufacturer's name, trademark or mark of origin and model number appears on the package and in the user manual

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# Appendix DEMKO CERTIFICATE

**Certificate No.** D-06327-A8

**Page** 5/5

**Date of Issue** 2022-04-21

## **Alternate certification Mark for cables**

As an alternative to the D-Mark specified above the alternate D-Mark, displayed below, can appear on certified cables only. Minimum size is not specified, as long as the mark is legible.

<DEMKO>

The alternate D-Mark may be cast, stamped or molded into the cable and continue throughout the length of the cable as specified in the applicable cable standard.

All content shall be in accordance with the details provided on this D-Mark Certificate.

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