



A NEW GENERATION OF ECGs

# QUICKTRONIC® MULTIWATT – ONE FOR MANY

THERE IS LIGHT. AND THERE IS OSRAM.

**OSRAM**

# ONE FOR MANY: THE NEW GENERATION OF VERSATILE ECGs.

## TOO MANY SPECIALISTS

Without putting too fine a point on it, traditional electronic control gear for fluorescent lamps have been reliable but depressingly limited. Each ECG has been perfectly matched to a particular type of lamp and a particular wattage. Over the past few years there has been a welcome increase in the number of new, better and more effective fluorescent lamp systems, with the unfortunate result that the number of different ECGs has grown out of proportion. This is a problem not only because of the number of different types that have to be stocked and the amount of capital that this ties up, but also because it acts as a brake on the flexibility needed nowadays in luminaire manufacture and lighting design.

## ENTER THE GENERALS

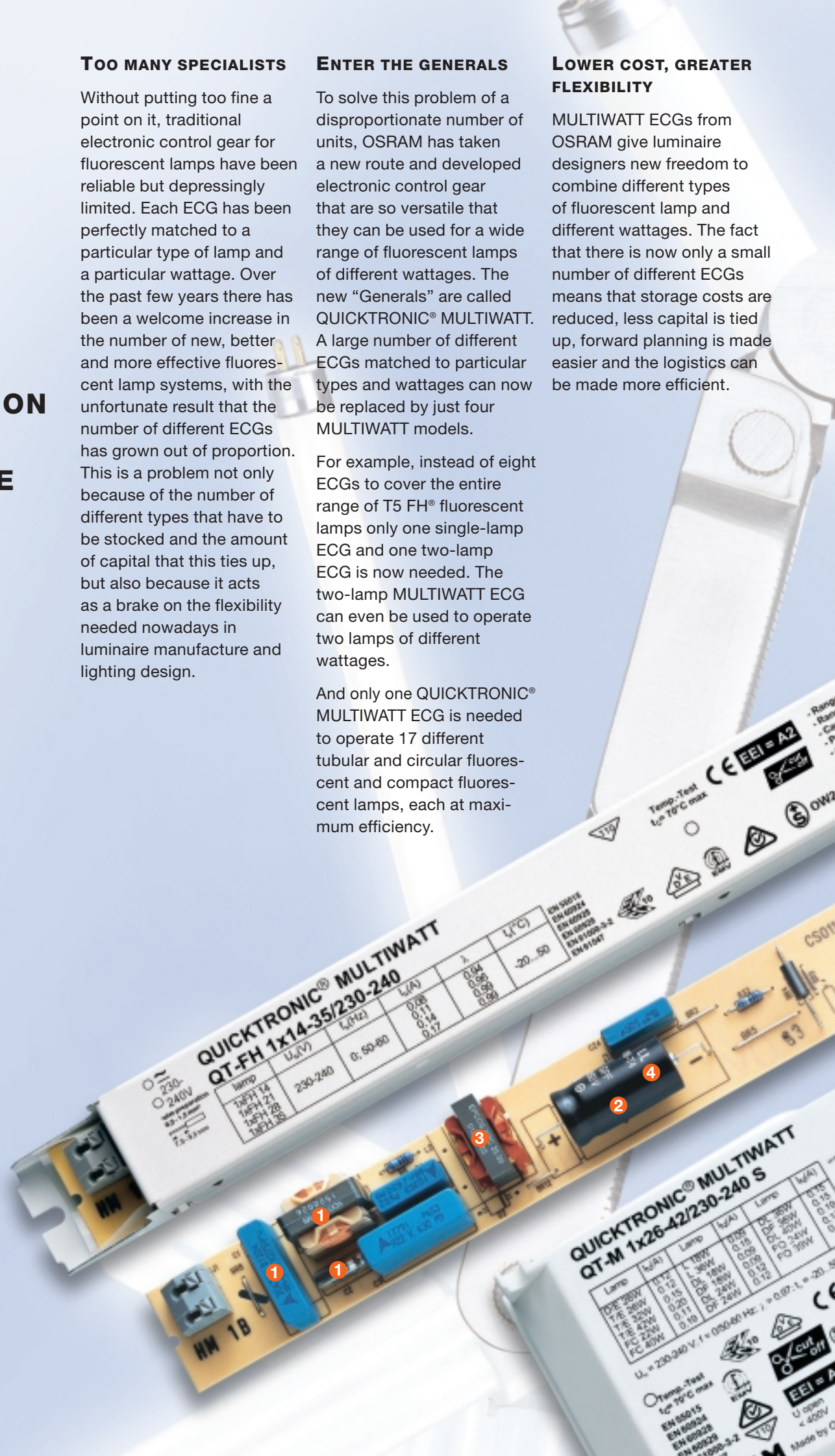
To solve this problem of a disproportionate number of units, OSRAM has taken a new route and developed electronic control gear that are so versatile that they can be used for a wide range of fluorescent lamps of different wattages. The new "Generals" are called QUICKTRONIC® MULTIWATT. A large number of different ECGs matched to particular types and wattages can now be replaced by just four MULTIWATT models.

For example, instead of eight ECGs to cover the entire range of T5 FH® fluorescent lamps only one single-lamp ECG and one two-lamp ECG is now needed. The two-lamp MULTIWATT ECG can even be used to operate two lamps of different wattages.

And only one QUICKTRONIC® MULTIWATT ECG is needed to operate 17 different tubular and circular fluorescent and compact fluorescent lamps, each at maximum efficiency.

## LOWER COST, GREATER FLEXIBILITY

MULTIWATT ECGs from OSRAM give luminaire designers new freedom to combine different types of fluorescent lamp and different wattages. The fact that there is now only a small number of different ECGs means that storage costs are reduced, less capital is tied up, forward planning is made easier and the logistics can be made more efficient.



**QUICKTRONIC® MULTIWATT**  
**QT-FH 1x14-35/230-240**

| Lamp     | U <sub>a</sub> (V) | I <sub>a</sub> (Hz) | I <sub>a</sub> (A) | λ     | T <sub>a</sub> (°C) |
|----------|--------------------|---------------------|--------------------|-------|---------------------|
| T5 FH 14 | 230-240            | 0, 50-60            | 0,08               | 0,005 | -20...50            |
| T5 FH 21 |                    |                     | 0,14               | 0,005 |                     |
| T5 FH 28 |                    |                     | 0,17               | 0,005 |                     |
| T5 FH 35 |                    |                     | 0,17               | 0,005 |                     |

EN 50115  
EN 60924  
EN 60925  
EN 60926  
EN 61000-3-2  
EN 61047

**QUICKTRONIC® MULTIWATT**  
**QT-M 1x26-42/230-240 S**

| Lamp   | I <sub>a</sub> (A) | L <sub>a</sub> (Hz) | I <sub>a</sub> (A) | λ     | T <sub>a</sub> (°C) |
|--------|--------------------|---------------------|--------------------|-------|---------------------|
| TC 26W | 0,14               | 0,12                | 0,08               | 0,005 | 0...50              |
| TC 36W | 0,15               | 0,15                | 0,10               | 0,005 | 0...50              |
| TC 42W | 0,20               | 0,20                | 0,14               | 0,005 | 0...50              |
| TC 26W | 0,11               | 0,10                | 0,08               | 0,005 | 0...50              |
| TC 42W | 0,18               | 0,18                | 0,14               | 0,005 | 0...50              |

U<sub>a</sub> = 230-240 V, f = 50-60 Hz, j = 0,07, L<sub>a</sub> = 20...50

EN 50115  
EN 60924  
EN 60925  
EN 60926  
EN 61000-3-2

# LESS IS MORE.

## QUICKTRONIC® MULTIWATT QT-FH 1x14-35/230-240

### ONE INSTEAD OF FOUR

A single digital MULTIWATT FH® ECG now covers all four wattages (14, 21, 28 and 35 W) of the super-slim high-intensity FH® T5 fluorescent lamps instead of the four previously needed.

## PERMISSIBLE LAMPS AND LAMP COMBINATIONS QUICKTRONIC® MULTIWATT QT-FH 1x14-35/230-240

| Permissible lamps | Old ECGs           |
|-------------------|--------------------|
| FH 14 W           | QT-FH 1x14/230-240 |
| FH 21 W           | QT-FH 1x21/230-240 |
| FH 28 W           | QT-FH 1x28/230-240 |
| FH 35 W           | QT-FH 1x35/230-240 |

### QT-FH 1x14-35/ 230-240

No deviations in luminous flux compared to old single-wattage ECGs

## QUICKTRONIC® MULTIWATT QT-FH 2x14-35/230-240

### ONE INSTEAD OF FOUR, PLUS SIX NEW COMBINATIONS

The two-lamp MULTIWATT ECG for FH® lamps replaces four single-wattage models and opens up six new combinations of lamps of different wattages.

## PERMISSIBLE LAMPS AND LAMP COMBINATIONS QUICKTRONIC® MULTIWATT QT-FH 2x14-35/230-240

| Permissible lamps | Old ECGs           |
|-------------------|--------------------|
| 2 x FH 14 W       | QT-FH 2x14/230-240 |
| 2 x FH 21 W       | QT-FH 2x21/230-240 |
| 2 x FH 28 W       | QT-FH 2x28/230-240 |
| 2 x FH 35 W       | QT-FH 2x35/230-240 |

### QT-FH 2x14-35/ 230-240

No deviations in luminous flux compared to old single-wattage ECGs

Six new combinations with two lamps of different wattages, e.g. FH® 14 W and FH® 35 W

**QUICKTRONIC®  
MULTIWATT  
QT-M 1x26-42/230-240 S**

**ONE INSTEAD OF ELEVEN**

17 different lamp types/  
wattages can be operated  
on the new MULTIWATT ECG  
for (compact) fluorescent  
lamps. It therefore replaces  
eleven old ECGs.

**PERMISSIBLE LAMPS AND LAMP COMBINATIONS  
QUICKTRONIC® MULTIWATT QT-M 1x26-42/230-240 S**

| Permissible lamps      | Old ECGs            |
|------------------------|---------------------|
| DULUX T/E and D/E 26 W | QT-T/E 1x26/230-240 |
| DULUX T/E 32 W         | QT-T/E 1x32/230-240 |
| DULUX T/E 42 W         | QT-T/E 1x42/230-240 |
| DULUX L and F 18 W     | QT 1x18/230-240     |
| DULUX L and F 24 W     | QT 1x24/230-240     |
| DULUX L and F 36 W     | QT 1x36/230-240     |
| DULUX L 40 W           | QT 1x40/230-240     |
| FC 22 W                | QT-FC 1x22/230-240  |
| FC 40 W                | QT-FC 1x40/230-240  |
| L 18 W                 | QT 1x18/230-240     |
| L 36 W                 | QT 1x36/230-240     |
| FQ 24 W                | QT-FQ 1x24/230-240  |
| FQ 39 W                | QT-FQ 1x39/230-240  |
| <b>17 lamps</b>        | <b>11 ECGs</b>      |

**QT-M 1x26-42/  
230-240 S**

No deviations in  
luminous flux compared  
to old single-wattage  
ECGs

**QUICKTRONIC®  
MULTIWATT  
QT-M 2x26-32/230-240 S**

**ONE INSTEAD OF SEVEN,  
PLUS MORE THAN 100  
WATTAGE COMBINATIONS**

The two-lamp MULTIWATT  
ECG for compact fluorescent  
lamps takes over the work  
of seven old ECGs. It can  
operate two lamps of the  
same wattage of 12 different  
types or more than 100  
possible combinations of  
lamps of different wattages.

**PERMISSIBLE LAMPS AND LAMP COMBINATIONS  
QUICKTRONIC® MULTIWATT QT-M 2x26-32/230-240 S**

| Permissible lamps          | Old ECGs               |
|----------------------------|------------------------|
| 2 x DULUX T/E and D/E 26 W | QT-T/E 2x26/230-240    |
| 2 x DULUX T/E 32 W         | QT-T/E 2x32/230-240    |
| 2 x DULUX L and F 18 W     | QT 2x18/230-240        |
| 2 x DULUX L and F 24 W     | QT 2x24/230-240        |
| 2 x DULUX L and F 36 W     | QT 2x36/230-240        |
| 2 x FC 22 W                | 2 x QT-FC 1x22/230-240 |
| 2 x L 18 W                 | QT 2x18/230-240        |
| 2 x FQ 24 W                | QT-FQ 2x24/230-240     |
| <b>12 lamps</b>            | <b>7 ECGs</b>          |

**QT-M 2x26-32/  
230-240 S**

No deviations in  
luminous flux compared  
to old single-wattage  
ECGs

More than 100 combi-  
nations of two lamps of  
different wattages  
≤ 64 W<sub>HF</sub>, e.g. FC 40 W  
and OSRAM DULUX® T/E  
26 W

# NEW BENEFITS THANKS TO INNOVATIVE TECHNOLOGY AND TRADITIONAL OSRAM QUALITY

## OSRAM-IC INSIDE – AN INTEGRATED CIRCUIT IN THE ECG ENSURES PERFECT OPERATION

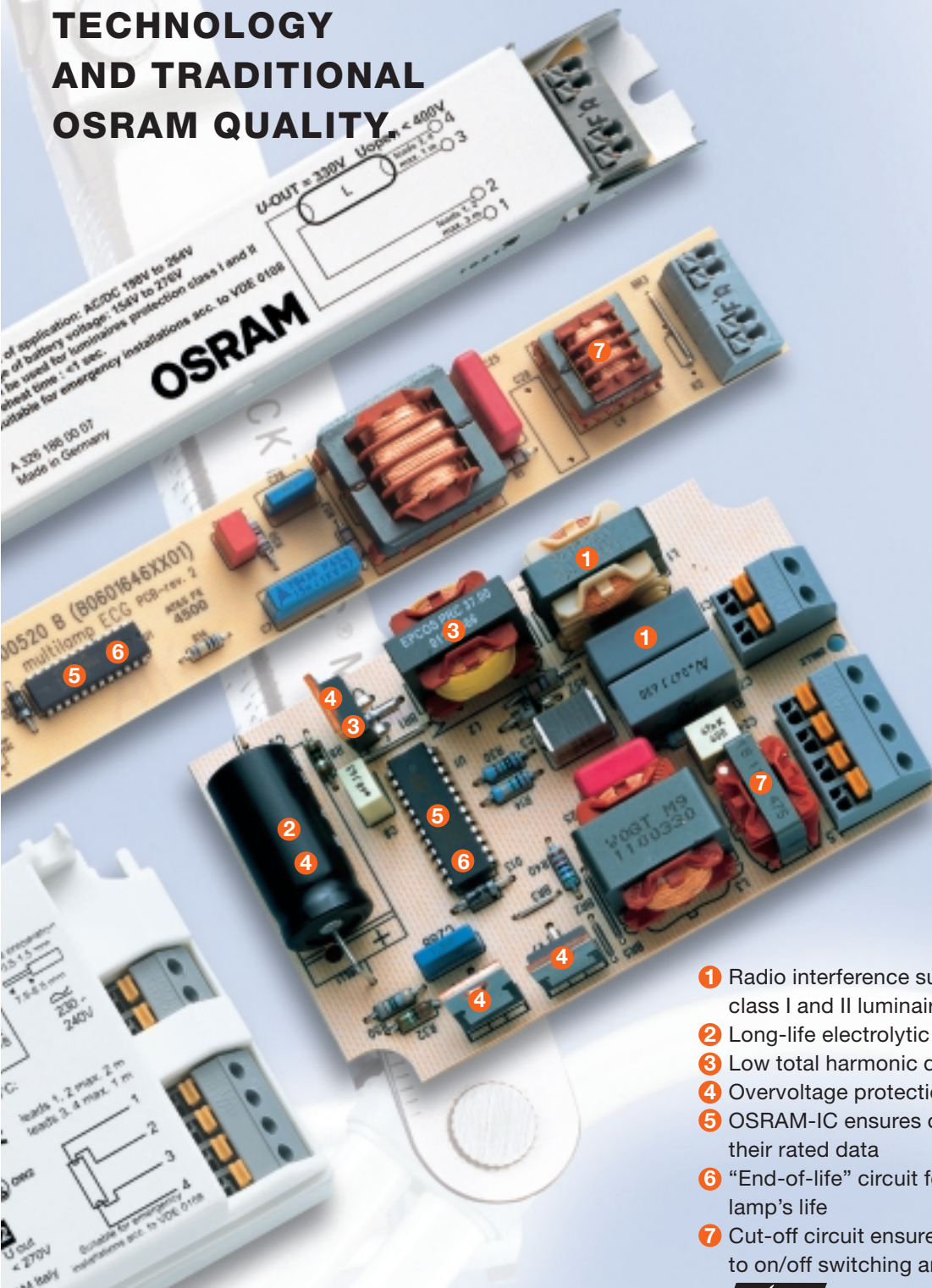
The heart of the new versatile ECG technology of QUICKTRONIC® MULTIWATT is the OSRAM IC (integrated circuit). It ensures that all the lamps approved for use with the MULTIWATT ECG are operated at maximum efficiency within their rated data.

This means that there are no deviations in luminous flux compared to old single-wattage ECGs. We have even managed to reduce the lowest temperature for reliable ignition with the MULTIWATT ECGs to  $-20^{\circ}\text{C}$ . Ignition time has been reduced to less than one second.

## HIGH OSRAM QUALITY STANDARDS

The same strict quality standards that apply to the OSRAM QUICKTRONIC® family also apply to MULTIWATT ECGs:







- Optimum operation of all approved lamps within their rated data
- Lamp operation to EN 60929 and IEC 929
- Operational safety of the ECGs to EN 60928 and IEC 60928
- “End-of-life” circuit for safe shutdown at the end of the lamp’s life
- Automatic restart after relamping
- Cut-off technology with disconnection of filament heating for greater luminaire efficiency, maximum lamp life and minimum self-heating
- Good radio interference suppression
- Mains harmonic content to EN 61000-3-2 and IEC 1000-3-2
- Immunity to EN 61547 and IEC 1547









- 1 Radio interference suppression for protection class I and II luminaires
- 2 Long-life electrolytic capacitor (50 000 h at  $85^{\circ}\text{C}$ )
- 3 Low total harmonic distortion THD  $<10\%$
- 4 Overvoltage protection for 320 V for 24 h or 350 V for 2 h
- 5 OSRAM-IC ensures optimum operation of all lamps within their rated data
- 6 “End-of-life” circuit for safe shutdown at the end of the lamp’s life
- 7 Cut-off circuit ensures minimal losses, high resistance to on/off switching and long life



## TECHNICAL DATA

| Lamp reference                  | QT-FH 1x14-35/230-240   | QT-FH 2x14-35/230-240   |
|---------------------------------|---|---|
| For lamps                       | 1x FH 14/21/28/35   | 2x FH 14/21/28/35 in any combination  |
| Lamp wattage                    | 14/21/28/35 W   | 14/21/28/35 W   |
| System wattage                  | 16/24/31/38 W   | 31/46/61/77 W   |
| Luminous flux                   | 1200/1900/2600/3300 lm  | 2x 1200/1900/2600/3300 lm   |
| Preheat time                    | t < 1 s   | t < 1 s   |
| Mains voltage                   | 230/240 V   | 230/240 V   |
| Voltage range (AC)              | 198 V–254 V   | 198 V–254 V   |
| Voltage range (DC)              | 176 V–254 V   | 176 V–254 V   |
| Mains current                   | 0.08/0.1/0.13/0.16 A  | 0.15/0.2/0.26/0.33 A  |
| Mains frequency                 | 0; 50–60 Hz   | 0; 50–60 Hz   |
| Operating frequency             | approx. 45–50 kHz   | approx. 45–50 kHz   |
| Radio interference suppression  | acc. to EN 55015  | acc. to EN 55015  |
| Harmonic content                | acc. to EN 61000-3-2  | acc. to EN 61000-3-2  |
| Immunity                        | acc. to EN 61547  | acc. to EN 61547  |
| Power factor $\lambda$          | 0.94 c/0.99 c/0.98 c/0.99 c   | 0.94 c/0.99 c/0.98 c/0.99 c   |
| Ambient temperature range $t_a$ | –20°C to +50°C  | –20°C to +50°C  |
| Casing temperature $t_c$        | max. +70°C  | max. +70°C  |
| Dimensions (l x w x h)          | 360 x 30 x 30 mm  | 360 x 30 x 30 mm  |
| Hole spacing                    | 350 mm  | 350 mm  |
| Weight                          | 280 g   | 300 g   |
| Approval marks                  |    |    |

QT-FH 2x14-35/230-240: different lamp wattages can be operated simultaneously on the ECG (e.g. FH 35 W and 14 W)

| Lamp reference                  | QT-M 1x26-42/230-240 S  |                    |                   |                            | Lamp reference                  | QT-M 2x26-32/230-240 S  |                    |                   |                            |
|---------------------------------|---|--------------------|-------------------|----------------------------|---------------------------------|---|--------------------|-------------------|----------------------------|
|                                 | HF lamp wattage (W <sub>HF</sub> )  | System wattage (W) | Mains current (A) | Luminous flux at 25°C (lm) |                                 | HF lamp wattage (W <sub>HF</sub> )  | System wattage (W) | Mains current (A) | Luminous flux at 25°C (lm) |
| For lamps                       |   |                    |                   |                            | For lamps                       |   |                    |                   |                            |
| DULUX D/E 26 W                  | 24  | 27                 | 0.12              | 1750                       | 2 x DULUX D/E 26 W              | 49  | 54                 | 0.23              | 3500                       |
| DULUX T/E 26 W                  | 24  | 27                 | 0.12              | 1750                       | 2 x DULUX T/E 26 W              | 49  | 54                 | 0.23              | 3500                       |
| DULUX T/E 32 W                  | 32  | 35                 | 0.15              | 2400                       | 2 x DULUX T/E 32 W              | 64  | 70                 | 0.30              | 4800                       |
| DULUX T/E 42 W                  | 42  | 46                 | 0.20              | 3200                       | 2 x DULUX L 18 W                | 32  | 35                 | 0.16              | 2300                       |
| DULUX L 18 W                    | 16  | 18                 | 0.09              | 1150                       | 2 x DULUX L 24 W                | 49  | 54                 | 0.23              | 3500                       |
| DULUX L 24 W                    | 23  | 26                 | 0.12              | 1750                       | 2 x DULUX L 36 W                | 64  | 70                 | 0.30              | 5600                       |
| DULUX L 36 W                    | 32  | 35                 | 0.15              | 2800                       | 2 x DULUX F 18 W                | 32  | 35                 | 0.16              | 2100                       |
| DULUX L 40 W                    | 40  | 44                 | 0.19              | 3500                       | 2 x DULUX F 24 W                | 49  | 54                 | 0.23              | 3300                       |
| DULUX F 18 W                    | 16  | 18                 | 0.09              | 1050                       | 2 x DULUX F 36 W                | 64  | 70                 | 0.30              | 5400                       |
| DULUX F 24 W                    | 23  | 26                 | 0.12              | 1650                       | 2 x L18 W                       | 32  | 35                 | 0.16              | 2600                       |
| DULUX F 36 W                    | 32  | 35                 | 0.15              | 2700                       | 2 x FC 22 W                     | 49  | 54                 | 0.23              | 3600                       |
| L18 W                           | 17  | 19                 | 0.09              | 1300                       | 1 x FC 22 W + 40 W              | 64  | 70                 | 0.30              | 1800 + 3200                |
| L36 W                           | 32  | 35                 | 0.15              | 3200                       | 2 x FQ 24 W                     | 49  | 54                 | 0.23              | 3500                       |
| FC 22 W                         | 23  | 26                 | 0.11              | 1800                       |                                 |   |                    |                   |                            |
| FC 40 W                         | 40  | 44                 | 0.18              | 3200                       |                                 |   |                    |                   |                            |
| FQ 24 W                         | 24  | 27                 | 0.12              | 1750                       |                                 |   |                    |                   |                            |
| FQ 39 W                         | 37  | 40                 | 0.17              | 3000                       |                                 |   |                    |                   |                            |
| Preheat time                    | t < 1 s   |                    |                   |                            | Preheat time                    | t < 1 s   |                    |                   |                            |
| Mains voltage                   | 230/240 V   |                    |                   |                            | Mains voltage                   | 230/240 V   |                    |                   |                            |
| Voltage range (AC)              | 198 V–254 V   |                    |                   |                            | Voltage range (AC)              | 198 V–254 V   |                    |                   |                            |
| Voltage range (DC)              | 176 V–254 V   |                    |                   |                            | Voltage range (DC)              | 176 V–254 V   |                    |                   |                            |
| Mains frequency                 | 0; 50–60 Hz   |                    |                   |                            | Mains frequency                 | 0; 50–60 Hz   |                    |                   |                            |
| Operating frequency             | approx. 45 kHz  |                    |                   |                            | Operating frequency             | approx. 45 kHz  |                    |                   |                            |
| Radio interference suppression  | acc. to EN 55015  |                    |                   |                            | Radio interference suppression  | acc. to EN 55015  |                    |                   |                            |
| Harmonic content                | acc. to EN 61000-3-2  |                    |                   |                            | Harmonic content                | acc. to EN 61000-3-2  |                    |                   |                            |
| Immunity                        | acc. to EN 61547  |                    |                   |                            | Immunity                        | acc. to EN 61547  |                    |                   |                            |
| Power factor $\lambda$          | 0.97 c  |                    |                   |                            | Power factor $\lambda$          | 0.97 c  |                    |                   |                            |
| Ambient temperature range $t_a$ | –20°C to +50°C  |                    |                   |                            | Ambient temperature range $t_a$ | –20°C to +50°C  |                    |                   |                            |
| Casing temperature $t_c$        | max. +70°C  |                    |                   |                            | Casing temperature $t_c$        | max. +70°C  |                    |                   |                            |
| Dimensions (l x w x h)          | K2 (103 x 67 x 31 mm)   |                    |                   |                            | Dimensions (l x w x h)          | K3 (123 x 79 x 33 mm)   |                    |                   |                            |
| Hole spacing                    | 110 mm  |                    |                   |                            | Hole spacing                    | 129.5 mm  |                    |                   |                            |
| Weight                          | 160 g   |                    |                   |                            | Weight                          | 240 g   |                    |                   |                            |
| Approval marks                  |    |                    |                   |                            | Approval marks                  |    |                    |                   |                            |

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