

EU Declaration of Conformity

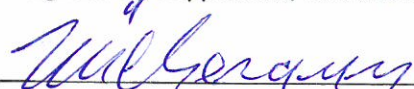

Document number: 2016 / 16 / 1D
Manufacturer or representative: Radium Lampenwerk GmbH
Address: Dr. Eugen-Kersting-Str. 6
D-51688 Wipperfürth
Germany
Brand name or trade mark: Radium
Product type: Halogen lamp
Product designation: Tungsten Halogen lamps
 See attached list

The designated product(s) is (are) in conformity with the relevant Union harmonisation legislation:

- | | | |
|-------------------------------------|--------------------------------------|---|
| <input checked="" type="checkbox"/> | 2014/35/EU | Directive of the European Parliament and of the Council of 26 February 2014 on the harmonisation of the laws of the Member States relating to the making available on the market of electrical equipment designed for use within certain voltage limits; Official Journal of the EU L96, 29/03/2014, p. 357-374) |
| <input type="checkbox"/> | 2014/30/EU | Directive of the European Parliament and of the Council of 26 February 2014 on the harmonisation of the laws of the Member States relating to electromagnetic compatibility; Official Journal of the EU L96, 29/03/2014, p. 79-106 |
| <input checked="" type="checkbox"/> | 2009/125/EC
and amendments | Directive of the European Parliament and of the Council of 21 October 2009 establishing a framework for the setting of ecodesign requirements for energy-related products |
| <input checked="" type="checkbox"/> | 244/2009
and amendments | Commission Regulation (EC) implementing Directive 2005/32/EC of the European Parliament and of the Council with regard to ecodesign requirements for non-directional household lamps |
| <input type="checkbox"/> | 245/2009
and amendments | Commission Regulation (EC) implementing Directive 2005/32/EC of the European Parliament and of the Council with regard to ecodesign requirements for fluorescent lamps without integrated ballast, for high intensity discharge lamps, and for ballasts and luminaires able to operate such lamps, and repealing Directive 2000/55/EC of the European Parliament and of the Council |
| <input type="checkbox"/> | 1194/2012
and amendments | Commission Regulation (EU) No 1194/2012 of 12 December 2012 implementing Directive 2009/125/EC of the European Parliament and of the Council with regard to ecodesign requirements for directional lamps, light emitting diode lamps and related equipment |
| <input checked="" type="checkbox"/> | 2011/65/EU
and amendments | Directive of the European Parliament and of the Council of 8 June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment; Official Journal of the EU L174, 1/07/2011, p. 88-110 |
| <input type="checkbox"/> | 1999/5/EC
and amendments | Directive of the European Parliament and of the Council of 9 March 1999 on radio equipment and telecommunications terminal equipment and the mutual recognition of their conformity (applicable until 2017-06-12) |
| | 2014/53/EU | Directive of the European Parliament and of the Council of 16 April 2014 on the harmonisation of the laws of the Member States relating to the making available on the market of radio equipment and repealing Directive 1999/5/EC (applicable from 2016-06-13)
Official Journal of the 2015/ C226/ 07 |

Last two digits of the year in which the CE marking was affixed: 97

Place and date of signatures: Wipperfürth, 09.01.2017

Signatures:  
Quality Management Quality Assurance

Names: Michael Hülsemann Bernhard Kläser

This declaration of conformity is issued under the sole responsibility of the manufacturer or representative. It certifies compliance with the indicated Directives, but implies no warranty of properties.

EU Declaration of Conformity

Annex

Document number: 2016 / 16 / 1D

The conformity of the designated product(s) with the provisions of the European **Low Voltage Directive** is given by the compliance with the following European Standard(s) or other specifications. If not elsewhere/otherwise indicated the edition/amendment as referenced below applies.

<input type="checkbox"/>	EN 60155: 1995 + A1:1995 + A2:2007	Glow-starters for fluorescent lamps
<input type="checkbox"/>	EN 60432-1: 2000 + A1:2005 + A2:2012	Incandescent lamps — Safety specifications — Part 1: Tungsten filament lamps for domestic and similar general lighting purposes
<input type="checkbox"/>	EN 60432-2: 2000 + A1:2005 + A2:2012	Incandescent lamps — Safety specifications — Part 2: Tungsten halogen lamps for domestic and similar general lighting purposes
<input checked="" type="checkbox"/>	EN 60432-3: 2013	Incandescent lamps — Safety specifications — Part 3: Tungsten halogen lamps (non-vehicle)
<input type="checkbox"/>	EN 60598-1: 2015	Luminaires — Part 1: General requirements and tests
<input type="checkbox"/>	EN 60598-2-1: 1989	Luminaires — Part 2-1: Particular requirements — Fixed general purpose luminaires
<input type="checkbox"/>	EN 60598-2-2: 2012	Luminaires — Part 2-2: Particular requirements — Recessed luminaires
<input type="checkbox"/>	EN 60598-2-3: 2003 + A1:2011	Luminaires — Part 2-3: Particular requirements — Luminaires for road and street lighting
<input type="checkbox"/>	EN 60598-2-4: 1997	Luminaires — Part 2-4: Particular requirements — Portable general purpose luminaires
<input type="checkbox"/>	EN 60598-2-5: 1998	Luminaires — Part 2-5: Particular requirements — Floodlights
<input type="checkbox"/>	EN 60598-2-6: 1994 + A1:1997	Luminaires — Part 2-6: Particular requirements — Luminaires with built-in transformers for filament lamps
<input type="checkbox"/>	EN 60598-2-7: 1989 + A2:1996 + A13:1997	Luminaires — Part 2-7: Particular requirements — Portable luminaires for garden use
<input type="checkbox"/>	EN 60598-2-8: 2013	Luminaires — Part 2-8 : Particular requirements — Handlamps
<input type="checkbox"/>	EN 60598-2-10: 2003	Luminaires — Part 2-10: Particular requirements — Portable luminaires for children
<input type="checkbox"/>	EN 60598-2-12: 2013	Luminaires — Part 2-12: Particular requirements — Mains socket-outlet mounted nightlights
<input type="checkbox"/>	EN 60598-2-13: 2012	Luminaires — Part 2-13: Particular requirements — Ground recessed luminaires
<input type="checkbox"/>	EN 60598-2-20: 2010	Luminaires — Part 2-20: Particular requirements — Lighting chains
<input type="checkbox"/>	EN 60598-2-22: 2014	Luminaires — Part 2-22: Particular requirements — Luminaires for emergency lighting
<input type="checkbox"/>	EN 60950-1: 2006 + A11:2009 + A1:2010 + A12:2011 + AC:2011 + A2:2013	Information technology equipment – Safety – Part 1: General requirements
<input type="checkbox"/>	EN 60968: 2013 + A11:2014	Self-ballasted lamps for general lighting services — Safety requirements
<input type="checkbox"/>	EN 61195: 1999 + A1:2013	Double-capped fluorescent lamps — Safety specifications

EU Declaration of Conformity

Annex

Document number: 2016 / 16 / 1D

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- | | | |
|--------------------------|---|---|
| <input type="checkbox"/> | EN 61199:
2011 + A1:2013 | Single-capped fluorescent lamps — Safety specifications |
| <input type="checkbox"/> | EN 61347-1:
2015 | Lamp controlgear — Part 1: General and safety requirements |
| <input type="checkbox"/> | EN 61347-2-1:
2001 + Corr. 2003 +
A1:2006 + Corr. 2006 +
Corr. 2010 + A2:2014 | Lamp controlgear — Part 2-1: Particular requirements for starting devices (other than glow starters) |
| <input type="checkbox"/> | EN 61347-2-2:
2012 | Lamp controlgear — Part 2-2: Particular requirements for d. c. or a. c. supplied electronic step-down convertors for filament lamps |
| <input type="checkbox"/> | EN 61347-2-3:
2011 + Corr. 2011 | Lamp controlgear — Part 2-3: Particular requirements for a. c. and/or d. c. supplied electronic ballasts for fluorescent lamps |
| <input type="checkbox"/> | EN 61347-2-7:
2012 | Lamp controlgear — Part 2-7: Particular requirements for battery supplied electronic controlgear for emergency lighting (self-contained) |
| <input type="checkbox"/> | EN 61347-2-8:
2001 + Corrigendum:
2003+ A1:2006
+ Corrigendum:2010 | Lamp controlgear — Part 2-8: Particular requirements for ballasts for fluorescent lamps |
| <input type="checkbox"/> | EN 61347-2-9:
2013 | Lamp controlgear — Part 2-9: Particular requirements for ballasts for discharge lamps (excluding fluorescent lamps) |
| <input type="checkbox"/> | EN 61347-2-10:
2001 + A1:2009 +
Corrigendum:2010 | Lamp controlgear — Part 2-10: Particular requirements for electronic invertors and convertors for high-frequency operation of cold start tubular discharge lamps (neon tubes) |
| <input type="checkbox"/> | EN 61347-2-11:
2001 + Corrigendum:2002 +
Corrigendum:2010 | Lamp controlgear — Part 2-11: Particular requirements for miscellaneous electronic circuits used with luminaires |
| <input type="checkbox"/> | EN 61347-2-12:
2005 + A1:2010 +
Corr.2010 | Lamp controlgear — Part 2-12: Particular requirements for d. c. or a. c. supplied electronic ballasts for discharge lamps (excluding fluorescent lamps) |
| <input type="checkbox"/> | EN 61347-2-13:
2014 | Lamp controlgear — Part 2-13: Particular requirements for d. c. or a. c. supplied electronic controlgear for LED modules |
| <input type="checkbox"/> | EN 61549:
2003 + A1:2005 + A2:2010
+ A3:2012 | Miscellaneous lamps |
| <input type="checkbox"/> | EN 62031:
2008 + A1:2013 + A2:2015 | LED modules for general lighting — Safety specifications |
| <input type="checkbox"/> | EN 62034:
2012 | Automatic test systems for battery powered emergency escape lighting |
| <input type="checkbox"/> | EN 62035:
2000 + A1:2003 + A2:2012 | Discharge lamps (excluding fluorescent lamps) — Safety specifications |
| <input type="checkbox"/> | EN 62368-1: 2014 + AC:
2015 | Audio/video, information and communication technology equipment – Part 1: Safety requirements |

EU Declaration of Conformity

Annex

Document number: 2016 / 16 / 1D

The conformity of the designated product(s) with the provisions of the European **Low Voltage Directive** Directive is given by the compliance with the following European Standard(s) or other specifications. If not elsewhere/otherwise indicated the edition/amendment as referenced below applies.

- | | | |
|--------------------------|--|---|
| <input type="checkbox"/> | EN 62493:
2015 | Assessment of lighting equipment related to human exposure to electromagnetic fields |
| <input type="checkbox"/> | EN 62532:
2011 | Fluorescent induction lamps — Safety specifications |
| <input type="checkbox"/> | EN 62560:
2012 + A1:2015 + AC:2015 | Self-ballasted LED-lamps for general lighting services by voltage > 50 V — Safety specifications |
| <input type="checkbox"/> | EN 60669-2-1:
2004+A12009 | Switches for household and similar fixed electrical installations - Part 2-1: Particular requirements - Electronic switches (IEC 60669-2-1:2002, modified) / Corrected and reprinted in 2007-12 |
| <input type="checkbox"/> | EN 62471:
2008 | Photobiological safety of lamps and lamp systems |
| <input type="checkbox"/> | EN 62733:
2015 | Programmable components in electronic lamp controlgear |

EU Declaration of Conformity

Annex

Document number: 2016 / 16 / 1D 1D

The conformity of the designated product(s) with the provisions of the European **EMC Directive** is given by the compliance with the following European Standard(s) or other specifications. If not elsewhere/otherwise indicated the edition/amendment as referenced below applies.

- | | | |
|--------------------------|------------------------------------|---|
| <input type="checkbox"/> | EN 55015:
2013 + A1:2015 | Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment |
| <input type="checkbox"/> | EN 61000-3-2:
2014 | Electromagnetic compatibility (EMC) — Part 3-2: Limits — Limits for harmonic current emissions (equipment input current ≤ 16 A per phase) |
| <input type="checkbox"/> | EN 61000-3-3:
2013 | Electromagnetic compatibility (EMC) — Part 3-3: Limits — Limitation of voltage changes, voltage fluctuations and flicker in public low voltage supply systems, for equipment with rated current ≤ 16 A per phase and not subjected to conditional connection |
| <input type="checkbox"/> | EN 61547:
2009 | Equipment for general lighting purposes — EMC immunity requirements |
| <input type="checkbox"/> | EN 50498: 2010 | Electromagnetic compatibility (EMC) –
Product family standard for aftermarket electronic equipment in vehicles |
| <input type="checkbox"/> | | |

EU Declaration of Conformity Annex

Document number: 2016 / 16 / 1D

The conformity of the designated product(s) with the provisions of the European **eco design (ERP) Directive** is given by the compliance with the following European Standard(s). If not elsewhere/otherwise indicated the edition/amendment as referenced below applies.

-
- | | | |
|--------------------------|--|---|
| <input type="checkbox"/> | EN 50294:
1998 + A1:2001 + A2:2003 | Measurement method of total input power of ballast-lamp circuits |
| <input type="checkbox"/> | EN 62442-1: 2011 | Energy performance of lamp controlgear - Part 1: Controlgear for fluorescent lamps - Method of measurement to determine the total input power of controlgear circuits and the efficiency of the controlgear |
| <input type="checkbox"/> | EN 62442-2: 2014 | Energy performance of lamp controlgear – Part 2: Controlgear for high intensity discharge lamps (excluding fluorescent lamps) – Method of measurement to determine the efficiency of the controlgear |
| | EN 62442-3:
2014 | Energy performance of lamp controlgear – Part 3: Controlgear for halogen lamps and LED modules – Method of measurement to determine the efficiency of the controlgear |
| <input type="checkbox"/> | | |

EU Declaration of Conformity Annex

Document number: 2016 / 16 / 1D

The conformity of the designated product(s) with the provisions of the European Directive **RoHS** is given by the compliance with the following European Standard(s) or other specifications. If not elsewhere/otherwise indicated the edition/amendment as referenced below applies.

- | | | |
|-------------------------------------|-----------------------|--|
| <input checked="" type="checkbox"/> | EN 50581: 2012 | Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances |
| <input type="checkbox"/> | | |

EU Declaration of Conformity

Annex

Document number: 2016 / 16 / 1D

The conformity of the designated product(s) with the provisions of the European **radio equipment Directive** is given by the compliance with the following European Standard(s). If not elsewhere/otherwise indicated the edition/amendment as referenced below applies.

- | | | |
|--------------------------|---|---|
| <input type="checkbox"/> | ETSI EN 300 220-1 V2.1.1: | Electromagnetic compatibility and Radio spectrum Matters (ERM); Short Range Devices (SRD); Radio equipment to be used in the 25 MHz to 1 000 MHz frequency range with power levels ranging up to 500 mW; Part 1: Technical characteristics and test methods |
| <input type="checkbox"/> | ETSI EN 300 220-2 V2.1.2: | Electromagnetic compatibility and Radio spectrum Matters (ERM); Short Range Devices (SRD); Radio equipment to be used in the 25 MHz to 1 000 MHz frequency range with power levels ranging up to 500 mW; Part 2: Harmonized EN covering essential requirements under article 3.2 of the R&TTE Directive |
| <input type="checkbox"/> | ETSI EN 301 489-1 V1.8.1 | Electromagnetic compatibility and Radio spectrum Matters (ERM); Electro Magnetic Compatibility (EMC) standard for radio equipment and services; Part 1: Common technical requirements |
| <input type="checkbox"/> | ETSI EN 301 489-3 V1.4.1 | Electromagnetic compatibility and Radio spectrum Matters (ERM); Electro Magnetic Compatibility (EMC) standard for radio equipment and services; Part 3: Specific conditions for Short-Range Devices (SRD) operating on frequencies between 9 kHz and 40 GHz |
| <input type="checkbox"/> | EN 60950-1: 2006 + A11:2009 + A1:2010 + A12:2011 + AC:2011 + A2:2013 | Information technology equipment – Safety – Part 1: General requirements |
| <input type="checkbox"/> | EN 60825-1: 2014 | Safety of laser products - Part 1: Equipment classification and requirements (IEC 60825-1:2014) / Endorsement notice |
| <input type="checkbox"/> | EN 60065: 2014 | Audio, video and similar electronic apparatus - Safety requirements |
| <input type="checkbox"/> | EN 60432-1: 2000 + A1:2005 + A2:2012 | Incandescent lamps — Safety specifications — Part 1: Tungsten filament lamps for domestic and similar general lighting purposes |
| <input type="checkbox"/> | EN 60432-2: 2000 + A1:2005 + A2:2012 | Incandescent lamps — Safety specifications — Part 2: Tungsten halogen lamps for domestic and similar general lighting purposes |
| <input type="checkbox"/> | EN 60432-3: 2013 | Incandescent lamps — Safety specifications — Part 3: Tungsten halogen lamps (non-vehicle) |
| <input type="checkbox"/> | EN 60598-1: 2015 | Luminaires — Part 1: General requirements and tests |
| <input type="checkbox"/> | EN 60598-2-1: 1989 | Luminaires — Part 2-1: Particular requirements — Fixed general purpose luminaires |
| <input type="checkbox"/> | EN 60598-2-2: 2012 | Luminaires — Part 2-2: Particular requirements — Recessed luminaires |
| <input type="checkbox"/> | EN 60598-2-3: 2003 + A1:2011 | Luminaires — Part 2-3: Particular requirements — Luminaires for road and street lighting |
| <input type="checkbox"/> | EN 60598-2-4: 1997 | Luminaires — Part 2-4: Particular requirements — Portable general purpose luminaires |
| <input type="checkbox"/> | EN 60598-2-5: 1998 | Luminaires — Part 2-5: Particular requirements — Floodlights |
| <input type="checkbox"/> | EN 60598-2-6: 1994 + A1:1997 | Luminaires — Part 2-6: Particular requirements — Luminaires with built-in transformers for filament lamps |
| <input type="checkbox"/> | EN 60598-2-7: 1989 + A2:1996 + A13:1997 | Luminaires — Part 2-7: Particular requirements — Portable luminaires for garden use |
| <input type="checkbox"/> | EN 60598-2-8: 2013 | Luminaires — Part 2-8 : Particular requirements — Handlamps |
| <input type="checkbox"/> | EN 60598-2-10: 2003 | Luminaires — Part 2-10: Particular requirements — Portable luminaires for children |

- EN 60598-2-12:** 2013 Luminaires — Part 2-12: Particular requirements — Mains socket-outlet mounted nightlights
- EN 60598-2-13:** 2012 Luminaires — Part 2-13: Particular requirements — Ground recessed luminaires
- EN 60598-2-20:** 2010 Luminaires — Part 2-20: Particular requirements — Lighting chains
- EN 60598-2-22:** 2014 Luminaires — Part 2-22: Particular requirements — Luminaires for emergency lighting
- EN 60950-1:** 2006 + A11:2009 + A1:2010 + A12:2011 + AC:2011 + A2:2013 Information technology equipment – Safety – Part 1: General requirements
- EN 60968:** 2013 + A11:2014 Self-ballasted lamps for general lighting services — Safety requirements
- EN 61195:** 1999 + A1:2013 Double-capped fluorescent lamps — Safety specifications
- EN 61199:** 2011 + A1:2013 Single-capped fluorescent lamps — Safety specifications
- EN 61347-1:** 2015 Lamp controlgear — Part 1: General and safety requirements
- EN 61347-2-1:** 2001 + Corr. 2003 + A1:2006 + Corr. 2006 + Corr. 2010 + A2:2014 Lamp controlgear — Part 2-1: Particular requirements for starting devices (other than glow starters)
- EN 61347-2-2:** 2012 Lamp controlgear — Part 2-2: Particular requirements for d. c. or a. c. supplied electronic step-down convertors for filament lamps
- EN 61347-2-3:** 2011 + Corr. 2011 Lamp controlgear — Part 2-3: Particular requirements for a. c. and/or d. c. supplied electronic ballasts for fluorescent lamps
- EN 61347-2-7:** 2012 Lamp controlgear — Part 2-7: Particular requirements for battery supplied electronic controlgear for emergency lighting (self-contained)
- EN 61347-2-8:** 2001 + Corrigendum: 2003+ A1:2006 + Corrigendum:2010 Lamp controlgear — Part 2-8: Particular requirements for ballasts for fluorescent lamps
- EN 61347-2-9:** 2013 Lamp controlgear — Part 2-9: Particular requirements for ballasts for discharge lamps (excluding fluorescent lamps)
- EN 61347-2-10:** 2001 + A1:2009 + Corrigendum:2010 Lamp controlgear — Part 2-10: Particular requirements for electronic invertors and convertors for high-frequency operation of cold start tubular discharge lamps (neon tubes)
- EN 61347-2-11:** 2001 + Corrigendum:2002 + Corrigendum:2010 Lamp controlgear — Part 2-11: Particular requirements for miscellaneous electronic circuits used with luminaires
- EN 61347-2-12:** 2005 + A1:2010 + Corr.2010 Lamp controlgear — Part 2-12: Particular requirements for d. c. or a. c. supplied electronic ballasts for discharge lamps (excluding fluorescent lamps)
- EN 61347-2-13:** 2014 Lamp controlgear — Part 2-13: Particular requirements for d. c. or a. c. supplied electronic controlgear for LED modules
- EN 61549:** 2003 + A1:2005 + A2:2010 + A3:2012 Miscellaneous lamps
- EN 62031:** 2008 + A1:2013 + A2:2015 LED modules for general lighting — Safety specifications
- EN 62034:** 2012 Automatic test systems for battery powered emergency escape lighting
- EN 62035:** 2000 + A1:2003 + A2:2012 Discharge lamps (excluding fluorescent lamps) — Safety specifications
- EN 62368-1:** 2014 + AC: 2015 Audio/video, information and communication technology equipment – Part 1: Safety requirements

- EN 62493:** 2015 Assessment of lighting equipment related to human exposure to electromagnetic fields
- EN 62532:** 2011 Fluorescent induction lamps — Safety specifications
- EN 62560:** 2012 + A1:2015 + AC:2015 Self-ballasted LED-lamps for general lighting services by voltage > 50 V — Safety specifications
- EN 60669-2-1:** 2004+A1:2009 Switches for household and similar fixed electrical installations - Part 2-1: Particular requirements - Electronic switches (IEC 60669-2-1:2002, modified) / Corrected and reprinted in 2007-12
- EN 62471:** 2008 Photobiological safety of lamps and lamp systems
- EN 62733:** 2015 Programmable components in electronic lamp controlgear
- EN 55015:** 2013 + A1:2015 Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment
- EN 61000-3-2:** 2014 Electromagnetic compatibility (EMC) — Part 3-2: Limits — Limits for harmonic current emissions (equipment input current ≤ 16 A per phase)
- EN 61000-3-3:** 2013 Electromagnetic compatibility (EMC) — Part 3-3: Limits — Limitation of voltage changes, voltage fluctuations and flicker in public low voltage supply systems, for equipment with rated current ≤ 16 A per phase and not subjected to conditional connection
- EN 61547:** 2009 Equipment for general lighting purposes — EMC immunity requirements
- EN 50498:** 2010 Electromagnetic compatibility (EMC) – Product family standard for aftermarket electronic equipment in vehicles

EU Declaration of Conformity Attached list

Document number: 2016 / 16 / 1D / 1D

RJH-TS 48W/230/C/XE/R7S

RJH-TS 80W/230/C/XE/R7S

RJH-TS 120W/230/C/XE/R7S

RJH-TSK 120W/230/C/XE/R7S

RJH-TS 160W/230/C/XE/R7S

RJH-TS 230W/230/C/XE/R7S

RJH-TS 400W/230/C/XE/R7S