# Induction Lighting

# 100,000 hours The lamp you can fit and forget

Let's make things better.





# Working in partnership to find lighting solutions

All over the world, people are discovering the significant benefits that the revolutionary Philips Lighting QL system can deliver. On the streets and indoors, in both business and public areas, for functional and decorative applications, the long life of QL lamps is providing better lighting solutions, economically.

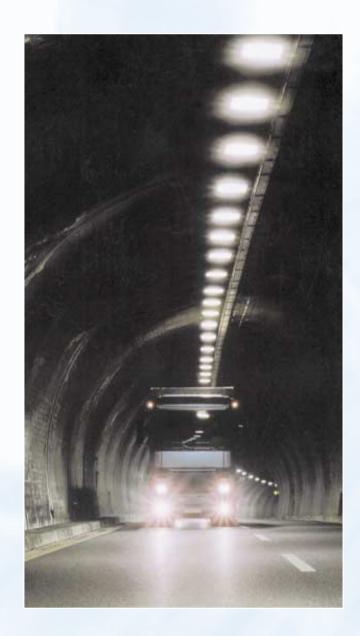
QL is the sort of breakthrough you would expect from Philips Lighting. We have invested consistently and heavily in the research and development of better lighting solutions—solutions that give you more scope, more efficiency, at less cost to you and the environment.

At all stages we work closely with luminaire manufacturers to make sure that the end users get the best possible solutions for their present and future needs. We see it as a three-way partnership between luminaire manufacturers, Philips Lighting and the end user, providing a continuous loop of feedback and product improvements which benefit everyone.

This brochure is designed to tell you more about the QL lamp system and what it offers you. It also contains case studies of the way others have exploited the unique qualities of QL. We hope they will provide you with the ideas and inspiration you need to produce a better solution through lighting.

for more information www.lighting.philips.com

# Fit and forget performance



for more information www.lighting.philips.com

#### Here's why QL Induction Lamps deliver a better lighting solution for your application

QL lamp manufacturer Philips Lighting has worked with a circle of major luminaire manufacturers in developing a comprehensive range of long life lighting solutions for:

- CITY
- RETAIL
- INDUSTRY
- PUBLIC BUILDINGS





#### ▲ City

Reduced maintenance costs are an important consideration for local authorities when specifying lighting in city areas. At the same time, there is a growing recognition of the importance of lighting in providing an attractive, safe urban environment. QL lighting is increasingly used in urban areas because it meets both cost and aesthetic criteria.

## Industrial

QL's low maintenance costs are an important plus for cost conscious businesses, especially as lighting failures can mean expensive downtime. The flicker free high frequency operation also helps to provide a restful, safe and productive working environment, in offices and production plants. QL is also compatible with video security systems.

#### QL induction lighting system: main features and benefits

FEATURE	BENEFIT	
Long lifetime (100,000 hours)	Minimum maintenance     required during lifetime	
Compact lamp with high light output (3,500, 6,000, or 12,000 lumen)	• Design freedom	
New generation /80 series colour fluorescent coating	<ul> <li>White light</li> <li>Choice of color temperatures</li> <li>Very good color rendering</li> <li>No color spread</li> </ul>	
Electronic HF	<ul> <li>High independence operation from mains supply; direct DC supply possible</li> <li>No flicker or stroboscopic effect</li> </ul>	
Instant hot or cold (re-)start (<0.1 s)	• High comfort, suitable for emergency lighting	
Amalgam controlled vapor pressure	• Constant light output over a wide temperature range	



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## Retail

Lamp failure and replacement at peak traffic times can be highly disruptive in a busy retail site. QL provides the essential 'fit and forget' characteristics required, together with exceptional lighting qualities to provide a radiant display area. QL's faithful color rendering, with no color shift over the lamp life, also helps provide a consistent selling environment.

#### Public Buildings

Effectively lit public buildings can transform the appearance of an area and enhance its status as a tourist or business location destination. The compact package of QL lighting provides designers with much greater freedom for creative lighting use, while reducing both energy and maintenance costs.

## QL: lighting technology

QL uses a technology in which high-frequency energy is induced in a low-pressure mercury gas by an induction coil. There are no conventional filaments or electrodes, which are the main lifetime-determining factors in conventional lighting systems.

The QL discharge vessel is internally coated with fluorescent powder in the same way as a TL lamp. The same range of colors can be achieved as with TLD New Generation /80 series lamps, allowing comfortable and effective lighting conditions to be created.

The high frequency at which the QL induction coil operates—2.65 MHz—completely eliminates the flicker which many people find disturbing from most other discharge lamp types. Starting performance of QL is virtually instantaneous both hot and cold, and the light output is obtained within only 0.1 second. Another benefit of QL's high-frequency operation is the absence of stroboscopic effects, which makes QL safe to use in industrial situations involving moving machinery. Mains voltage fluctuations have no effect on lamp performance: light output varies by no more than 2% over the voltage range 185-255V for systems rated at 230V nominal, and 108-132V for 120V nominal systems.

Lumen efficacy of QL is 70 lm/W, a performance which is comparable to that of TL fluorescent lamps, and over five times higher than that of conventional incandescent lamps.

The minimum operating lifetime expectation of the QL system is 60,000 hours or more, with a statistical failure rate of only around 1% per 4,000 hours. After 60,000 hours the expected mortality rate is less than 10%, with a maximum decline in light output of no more than 30% per system. This performance is many orders of magnitude higher than that of other lighting systems, and will offer QL users big savings in the costs of maintenance and regular lamp replacement.

#### QL range Lamp specifications

	QL 55W	QL 85W	QL 165W
Lumen output	3,500	6,000	12,000
Bulb $\varnothing$ / length (mm)	85/140	111/180	130/210
Lamp base	Click Base		Bayonet
Color temperature	/827*, /830, /840		/830, /840
Lifetime (50% survivals)	100,000 hours		

\*Not available in North America

# Long Life Quality Lighting from

#### QL SYSTEMS OFFERS A UNIQUE SET OF BENEFITS:

- Long lamp life
- A choice of warm to cool white light providing faithful colour reproduction
- Flicker-free light
- Wide range of operating temperature



**\*\*** Comet's new destination store needed high levels of illumination with a cool white temperature. We also had to have lights with fast starting instant restrike and above all, we had to have a long lamp life to give us maximum maintenance economy**?** 

STEVE LIVESEY

CONSTRUCTION AND FACILITIES CONTROLLER, COMET, UNITED KINGDOM

Philips Lighting Company 200 Franklin Square Drive = P.O. Box 6800 Somerset, NJ 08875-6800 I-800-555-0050 www.lighting.philips.com/nam A Division of Philips Electronics North America Corporation Printed in USA 06/02

Philips Lighting 281 Hillmount Road Markham, Ontario L6C 2S3 A Division of Philips Electronics Limited

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visit the Philips Lighting website at www.ql-lighting.com

Let's make things better.

#### NORTH AMERICA

United States **Philips Lighting Company** 200 Franklin Square Drive PO Box 6800 Somerset NJ 08875-6800 Tel: +1.732.563.3681 Fax: +1.732.563.3428

Canada Philips Electronics Limited 281 Hillmount Road Markham Ontario L6C 253 Tel: +1.905.201.4500 Fax: +1.905.887.7943

#### EUROPE

Austria Philips Licht GmbH Triester Straße 64 A-1101 Wien Tel: +43.1.60101.00 Fax: +43.1.60101.1968 Email: information.licht@philips.com

Belgium PHILIPS COMMERCIAL ACTIVITIES N.V./S.A. Div. Philips Lighting Tweestationsstraat 80/Rue des Deux Gares 80 1070 Brussels Tel: +32.2.525.7669 Fax: +32.2.525.7695 Email: marc.van.delm@philips.com

Czech Republic Ceská Republika Philips Lighting s.r.o. Safrankova 1 155 55 Praha 5 Tel: <u>+42.02.33099282</u>

Tel: +42.02.33099282 Fax: +42.02.33099325 Email: liborstedron@philips.com Denmark Philips Lys A/S

Frederikskaj 6 DK-1780 Copenhagen V Tel: +45.33.29.37.19 Fax: +45-33.29.39.31 Email: viggo.bremmer@philips.com

Finland OY Philips AB Sinikalliontie 3 FIN-02631 Espoo Tel: +358.9.615809 Fax: +358.9.61580940 Email: petri.haara@philips.com

France Philips Eclairage Direction Lampes OEM et Ballasts 9 rue Pierre Rigaud 94856 Ivry-sur-Seine Cedex Tel: +33.1.49876460 Fax: +33.1.49876461 Email: oem.info@philips.com

Germany Philips Licht Unternehmensbereich der Philips GmbH Steindamm 94 D-20099 Hamburg Tel: +49.40.2899.2886 Fax: +49.40.2899.2890 Email: simone.koerbelin@philips.com

Greece Philips Hellas S.A. PD Lighting 2, Artemidos Paradisos, Amaroussiou 15125 Athens Tel: +30.1.6883100 Fax: +30.1.6845728 Email: info.lighting.greece@philips.com

Hungary Philips Magyarország Kft. H-1119 Budapest Fehérvári út 84/a Tel: +36.1.3821852 Fax: +36.1.3821851 Email: miklos.frei@philips.com

Ireland Philips Electronics Ireland Limited Newstead Clonskeagh Dublin 14 Tel: +353.1.764.0000 Fax: +353.1.764.0121 Email: cel.oreilly@philips.com Italy Philips S.P.A.-Divisione Lighting Via G. Casati, 23 20052 Monza (MI) Tel: +39.039.2031 Fax: +39.039.2036127

The Netherlands Philips Nederland B.V. Licht O.E.M. Boschdijk 525 Postbus 90050 5600 PB Eindhoven Tel: +31.40.27.83110 Fax: +31.40.27.82273 Email: ger,jager@philips.com

Norway Philips Norge AS Division Lys Sandstuveien 70 Postboks 1, Manglerud N-0612 Oslo Tel: +47.22.748000 Fax: +47.22.748229 Email: lysinfo@philips.com

Poland Philips Lighting Poland S.A. Ul. Kossaka 150 64-920 Pila Tel: +48.67.351.3263 Tel: +48.67.351.3756 Fax: +48.67.351.3104 Email: bogdan.slek@philips.com

Spain PHILIPS IBÉRICA División Comercial Alumbrado O.E.M. Martínez Villergas, 49 Madrid 28027 Tel: +34,91566.9648/782 Fax: +34,91566.9242 Email: natalia.nieto@philips.com mari.carmen.sain2@philips.com

Sweden Philips AB Division Ljus Kottbygatan 7, Akalla S-16485 Stockholm Tel: +46.8,5985,22000 Fax: +46.8,5985,2760 Email: lamps.sweden@philips.com

Switzerland Philips AG Lighting Allmendstrasse 140 Postfach CH-8027 Zürich Tel: +41.1.4882211 Fax: +41.1.4883249 Web: www.lighting.philips.ch

Türk Philips TIC. A.S. Yukari Dudullu Organize sanayi Bolgesi 2. Cadde No: 28 81260 Umraniye, Istanbul Turkey Tel: +90.216.522.18.44 Fax: +90.216.522.18.35

United Kingdom Philips Lighting The Philips Centre 420-430 London Road Croydon, Surrey CR9 3QR Tel: +44.20.8683.2953 Fax: +44.20.8683.2953 Email: lampsandgear.uk@philips.com

LATIN AMERICA

 Brazil
 Philips Lighting

 Rua Verbo Divino, 1400–6th floor
 Chacara Santo Antonio

 04719 002 – São Paulo – SP – Brasil
 Tel: +55.11.5188.0633

 Fax: +55.11.5188.0675
 Fax: +55.11.5188.0675

#### ASIA

Hong Kong Philips Lighting Asia Pacific OEM Lighting 27F Hopewell Centre 17 Kennedy Road GPO BOX 2108 Wanchai Tel: +852.2876.7579 Fax: +852.2821.5503



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