

**THE DECORATIVE LIGHTING OF HEROES SQUARE 1996  
(BUDAPEST, HUNGARY)**

**DIE FESTBELEUCHTUNG DES HELDENPLATZES 1996  
(BUDAPEST, UNGARN)**

**L'ÉCLAIRAGE DE CÉRÉMONIE DE LA PLACE DES HEROS 1996  
(BUDAPEST, HONGRIE)**

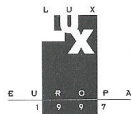
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**SUMMARY**

In 1996 Hungary celebrated the 1100th anniversary of its Conquest, the Millennium. One of the highlights of the celebrations was the inauguration of the ceremonial illumination of Heroes Square on 30 June 1996. In the square Millenary Monument is raised to commemorate the thousand-year anniversary (1896) of the Conquest. The Millenary Monument is a national symbol, it represents the thousand-year existence and the national unity of the Hungarian nation. The square is flanked by the Museum of Fine Arts and Art Gallery. The new ceremonial illumination of Heroes Square was presented by GE Lighting Tungsum Co. commemorating its 100th anniversary in this year, in honour of the Millennium anniversary, to the capital and to the Hungarian nation.

**ZUSAMMENFASSUNG**

Ungarn hat die 1100 Jahreswende seiner Gründung, das Millezentennarium im Jahr 1996 gefeiert. Einer der Glanzpunkten der Feste war das feierliche Übergeben der neuen Festbeleuchtung am 30. Juni 1996 am Heldenplatz. Am Platz befindet sich die zur Erinnerung der tausendjährigen Jahreswende errichtete Millenniumssäule. Die Millenniumssäule ist ein nationales Symbol, versinnbildend das tausendjährige Bestehen und die nationale Einheit des ungarischen Volkes. Der Platz ist von der Kunsthalle und dem Museum der Schönen Künste an den zwei Seiten begrenzt. Die neue Festbeleuchtung wurde von der ihre hunderte Jahreswende feiernden Aktiengesellschaft GE Lighting Tungsum der Hauptstadt Budapest und der Nation geschenkt.



## SOMMARIE

La Hongrie a célébré en 1996 le 1100ième anniversaire de la conquete arpadienne, le mille-centenaire. Un de les moments de la célébration était le 30 juin 1996, l'inauguration de l'illumination de cérémonie de la Place des Heros. En la place il y a le Monument Millénaire érigé en commémoration du millénaire anniversaire (1896) de la Conquete. Le Monument Millénaire est un symbole national, il représente l'existence de mille ans, l'unité nationale de la nation Hongroise. La place est flanquée du Musée des Beaux Arts et de la Galerie d'Art. L'illumination nouvelle de cérémonie de la Place des Heros a été donnée de la S.GE Lighting Tungsram a la capitale, comme un part de son centième anniversaire, en l'honneur de l'anniversaire mille-centenaire.

*"The motherland nourishes us not only with bread and wine but even ideas, senses and believe..." (Anatole France)*

The Hungarian tribes conquered and settled the Carpathian Basin under the leadership of Árpád at the end of ninth century. In 1896 the Parliament made the Millenary Monument erected to commemorate the thousand-year anniversary of the Conquest. The Millenary Monument as a national symbol represents the thousand-year existence and the unity of the Hungarian nation.

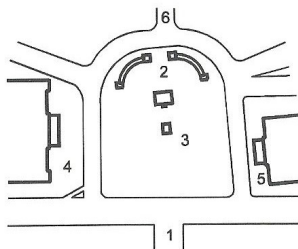
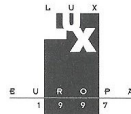


Figure 1

The Scene Of Heroes Square

- |                                    |                                 |
|------------------------------------|---------------------------------|
| 1: Andrassy street                 | 2: the Millenary Monument       |
| 3: the tomb of the unknown soldier | 4: the Museum of Fine Arts      |
| 5: Art Gallery                     | 6: the Bridge of Town Park Lake |



The monument is located in Heroes Square, in one of the most beautiful and best known point of Budapest (figure 1). Approaching it from Andrassy street the central column of the Millenary Monument is visible from a great distance. In front of it there is the tomb of the unknown soldier. The square is closed to the left by the Museum of Fine Arts, to the right by Art Gallery.

Hungary celebrated in 1996 the 1100th anniversary of its Conquest, the Millenary-centenary. One of the highlights of the celebrations was the inauguration of the decorative lighting of Heroes Square.

## Description

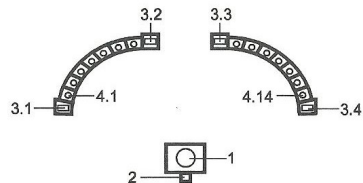


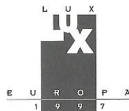
Figure 2

The Scene Of The Millenary Monument

- |                           |  |
|---------------------------|--|
| 1: the 36 m tall column   | 2: the statue of Árpád, leader of Hungarians           |
| 3: symbolic statue groups | 3.1: Work and Welfare                                  |
| 3.2: War                  | 3.3: Peace   |
| 3.4: Knowledge and Glory  | 4.1 - 4.14 figures of the biggest kings and commanders |

The semicircular colonnade, divided to two parts is 85 meter wide and 25 m depth. In its center the group of the seven tribal chiefs flanks the 36 meter tall central column, surmounted by a statue of the Archangel Gabriel (figure 2). It holds in hand the St. Crown and the Double Cross. (The Archangel statue won a gold-medal in the world exhibition, 1900, Paris.) The upper part of the colonnade is adorned by symbolic statue groups. The figures of the biggest kings and commanders of the Hungarian history are in the colonnade.

The Museum of Fine Arts is a great example of the eclectic architecture. The multi-divided main facade has a tympanum with colonnades.



Art Gallery is a building reminiscent in style to a Greek temple. Its facade made of bricks of rich terra-cotta colours. A wide steps conducts to the main entrance of six-pillar tympanum.

#### Illumination steps of Millenary Monument

- 1935- Lighting of column and the angel statue.
- 1961- Incandescent lighting. Illumination of column and kings' gallery.
- 1970 - Halogen lighting. Brightening of facade of Museums.
- 1981 - First sodium and metalhalide lighting.

#### The decorative lighting 1996

When the restoration of the central statue group in 1996 began, the demand for creating a new ceremonial illumination was arisen. At that moment the management of GE Lighting Europe made a decision that TUNGSRAM, as a part of its 100th anniversary, in honour of mille-centenary anniversary, presents the capital the decorative lighting of Heroes Square.

The decorative lighting was designed by Gábor Debreczeni, manager of the GE TUNGSRAM Illuminating Engineering Station.

#### Design considerations, objectives

- General purpose was to highlight the objects of great importance to separate them from the general surrounding. The column have to be visible from a long distance. The monument has to get greater importance than the other buildings.
- Conception: Guides present the Monument to tourists by statues, relieves from one to another. Therefore a dramatic, a little-bit theatrical flood lighting, well highlighting the details was needed. By so doing the atmosphere of place could charm the visitors and they could feel something from the past, the history of a nation they are visiting.



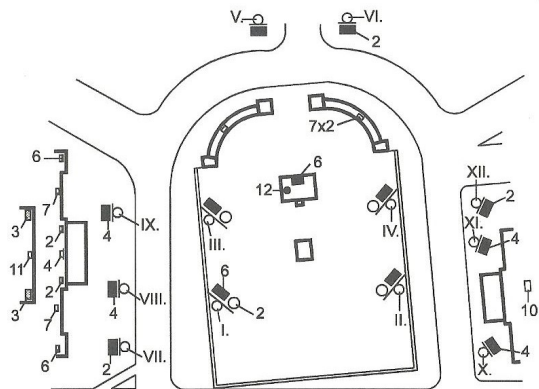
- Light source selection: The illumination of Heroes Square had to be in sharp contrast to the sodium lighting of the routes arriving the square. It can be realized either by a greater value of lighting or different colour lighting. Because of the rather coloured parts, light sources of good colour rendering were needed. In case of greater illumination a colour corrected sodium lamp can be considered but due to sodium lighting of the streets the necessary higher illumination would have needed high energy installation. If another colour is used the highlighting can be achieved even by less light. Therefore a metalhalide lamp of 4000k was used for all places.
- Square illumination: To achieve a uniform, overall impression the former sodium lamp area lighting has been replaced by metalhalide ones.
- Fixture selection: Flat fixtures having small mass impression and fitting into surrounding were selected. Where applicable, they were hidden mounted. The fixtures were latticed to avoid dazzling.
- Energy saving.

Taking into account these considerations the following lighting installation were developed. (figure 3)

#### Millenary Monument

- On poles I-IV. 8 - 8 pcs reflectors were mounted. Out of these 2 pcs SILL-250 floodlights highlight the angel statue. The other 6 pcs GE TUNGSRAM Powerflood (PF4)-M400 reflectors are directed to the column, the tribal chief statues and the symbolic groups on the top of the colonnades.
- 12 pcs of BEGA-70 reflectors were installed into the base of the central statue group. 6 pcs serve for highlighting the column and the other 6 pcs for the 6 leaders at both sides.
- 6 pcs PF4-M400 reflectors behind the column are used to brighten the colonnades and the king statues inside.
- 2 - 2 pcs PF4-M400 reflectors brighten the angel and the symbolic groups from behind on the poles V-VI.

- The king statues are illuminated by 2 pcs hidden MASTERPAK-70 reflectors, mounted on the top of the statue niche of colonnade.



**Figure 3** Layout Of The Floodlighting Of Heroes Square 1996

■ PF4-M400 rect. fl.	□ SUNPAK-150 ass. rect. fl.
▨ PF4-M250 rect. fl.	▨ SUNPAK-70 ass. rect. fl.
○ SILL-250 circ. fl.	● BEGA-70 circ. ass. fl.
□ Lighting pole	□ MASTERPAK-70 rect. fl.

(rect.: rectangular, fl.: floodlight, circ.: circular)

The column is lit uniformly. The statue of archangel Gabriel is even highlighted compared to it.

In addition to the light brightening of King's Gallery the statues got individual highlighting from above. Two floodlights illuminate each statues from the upper part of the colonnade. In spite that the majority of the statues are positioned forward from the centre of colonnade arc the light is nicely scattered on the oversize statues resulting in some cases higher than daylight illumination.

### Museum of Fine Arts

- The main entrance and tympanum is illuminated by 10 pcs PF4-M400 on poles of VII-VIII-IX.
- The wall surface behind the colonnade is brightened by 70 and 150W GE TUNGSRAM SUNPAK reflectors. The aisle is brightened by SUNPAK-70 reflectors and while the pillars of the side aisles by MASTERPAK-70 ones.
- On the catwalks of roofing above the main entrance 3 PF4-M250 reflectors brighten the upper pillars. The higher wall surface behind it is lit by 11 MASTERPAK-70 reflectors.

For the eclectic building, reminiscent in style to a Greek temple, the light must be used in a lower key, emphasizing the building elements and the statue groups of Tympanum. The aim of the lighting is to illuminate the pillars and the contour of the building and to brighten uniformly the wall surface behind the pillars. The relief within the central tympanum is highlighted, and the stairs must be brightened.

### Art Gallery

- The facade to the square and the tympanum are lit by 10 pcs PF4-M400 mounted to poles X-XI-XII, the wall surfaces behind the pillars by 10 pcs MASTERPAK-70 reflectors.

The aim of the lighting is to highlight pillars, brighten the wall surfaces, emphasized lighting of the tympanum and majolica and brighten the side facades.

### Assessment

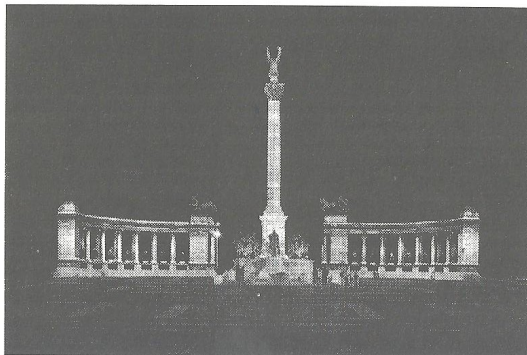
We think, that the main objectives have been achieved. Our feeling that a great progress has been done by developing and installing the new illumination to present Heroes Square at night as national symbol.

The following table demonstrates well that it is an energy saving equipment. While the lighting results have improved, the used energy has decreased. It is due to a well considered selection of light sources and to the good lighting conception.

	1935	1961	1972	1981	1996
No. of reflectors	12	45	75	146	163
Power (kW)	20	56	43,8	45,36	34,84

### Closing

Referring back to the introducing thought of Anatole France: Heroes Square, with the Millenary Monument in the middle, represents for the Hungarians the idea of the 1100-year existence of homeland, the sense of patriotism and their belief in future. It represents the future of Hungary that we, as a sovereign nation belonging to the united Europe, would like to make secure.



**Figure 4** The Decorative Lighting Of The Millenary Monument