

# UV-X™

Illumination system for corneal cross-linking



## Benefits:

- Unique in competence
- Unique in experience
- Unique safety
- Unique applications

competence - experience - safety

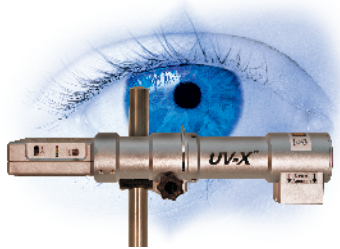
# IROC

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**competence - experience - safety**

## UV-X™

**Illumination system  
for corneal cross-linking**



**your solution for  
corneal cross-linking**

### **Unique in competence:**

- Developed by the inventors of the CXL technique
- Supported by a team of doctors and scientists
- More than 10 years of experience in the field of corneal crosslinking

### **Unique in experience:**

- Approved and registered by the health authorities in many countries
- Over 700 systems installed world wide
- Used in US and in other international clinical studies on CXL

### **Unique safety:**

- Redundant UV-safety check
- Overdosage impossible due to Köhler beam path
- Homogeneous illumination due to patented diffusor
- Preselected approved standard treatment parameters

### **Unique applications:**

- Progressive keratoconus / PMD
- Iatrogenic ectasia
- Corneal infections\*
- Thin corneas\*
- Corneal melting\*
- Combined topographic treatment\*
- Combined treatments with corneal rings\*

\* clinical trials ongoing



## Corneal cross-linking

Cross-linking of the cornea is a new curative approach to increase the mechanical stability of corneal tissue. The aim of this treatment is to create additional chemical bonds inside the corneal stroma by means of a highly localized photopolymerization.

Figure 1: Cross-linked and native cornea (In courtesy of Prof. Spoerl)



## The Device

The UV-X™ illumination system was developed by an experienced team around the inventors of the procedure, Prof. Theo Seiler and Prof. Eberhard Spoerl. It was designed with a special focus on an optically homogeneous irradiation of the cornea. The patented beam homogenizing optics of the UV-X™ device is essential for a

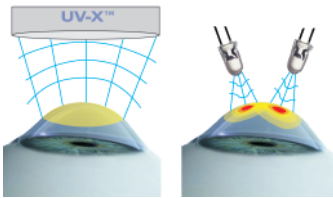


Figure 2: Advantage of Köhler illumination, homogeneous intensity over whole cornea

safe and efficient treatment procedure. The converging illumination beam of the UV-X™ device is already precompensating the corneal curvature thus minimizing reflection losses and zone enlargements.

## UV-X™ System

The UV-X™ illumination system includes a UV-lamp, UV-safety glasses, a table stand, a power supply and an UV-light meter. A floorstand is optional available.



Figure 3: UV-X™ - Package



Figure 4: Optional floorstand

## The original IROC illumination system

### UV-X™ specifications

<b>Wavelength:</b>	365 nm ± 10 nm
<b>Illumination intensity:</b>	3.0 mW/cm <sup>2</sup>
<b>Working distance:</b>	50 mm
<b>Light emission:</b>	continuous wave (cw)
<b>Illumination diameter:</b>	S = 7 mm, M = 9 mm, L = 11 mm
<b>Electric power:</b>	100 V - 240 V
<b>Patient positioning:</b>	placed on bed
<b>Dimensions:</b>	light source: 32 x 5 x 5 cm
<b>System weight:</b>	total: 6.5 kg, light source: 0.6 kg
<b>Timer:</b>	30 min
<b>Intensity check:</b>	UV light meter delivered with UV-X system, battery operated +9 V

CE1275

### UV-X™ optional accessories

<b>Floorstand:</b>	weight: 15 kg
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For further information about the UV-X™ illumination system or corneal cross-linking, please feel free to contact us.

## IROC AG

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