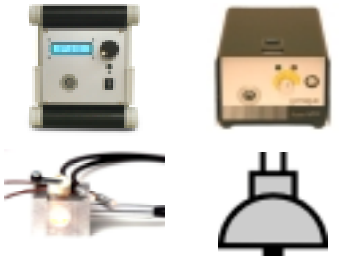
LUMOLUX
LIGHTING PROGRAMME
DEVELOPMENT, MANUFACTURE, OEM SALES / VAR

Faseroptik Henning GmbH

OUR SERVICES



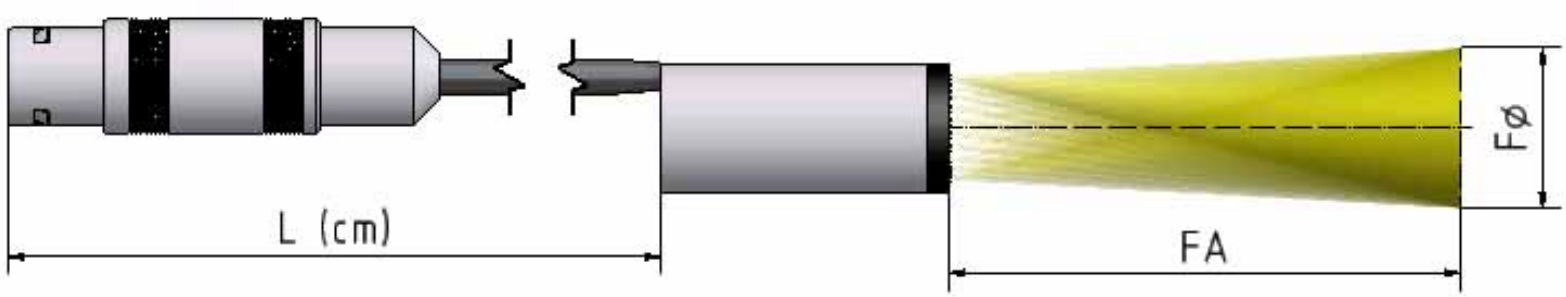
Individual illumination jobs and sensor solutions
Micro workspaces
Image processing systems

Development and manufacture of customer specific component assemblies
Micro-optics > optical calculations > energy & irradiation paths
Mechanics > mechanical prototypes > null series > series
Electronics > circuit board layout and assembly > software

Fibre optic assemblies in special areas
Environmental conditions
Temperature, humidity, chemical influences liquids, gases, electrical shock, EMC

Optical guides for laser beam processing
Digitised, controllable light sources
Components for analysis technology
Optoelectronic assemblies for computer peripheries
Conversion of electrical, optical and mechanical characteristic curves into optical signals.

Areas of application
Microscopes and micro workplace illumination, image processing illumination, visual inspection, inspection tasks. Automation for manufacturing systems, filling stations, assembly lines, tool machines, packaging machines, printing machines...



Temperature resistant		<90°C
Adapter for all light sources with quick coupling	KLQ06.00	LEMOSA plugs, light sources with active light emission >Ø6mm
Light guide type	A	Acrylic
Ring body	ALU	Black anodised aluminium

RING LIGHT FIXED FOCUS HOMOGENEOUS

		RG12 fF	**RG13 fF**
Shielding of the light supply		PVC hose black	Polyurethane hose black
Ring light interior diameter	iØ	12	13
Ring light exterior diameter	AØ	20	26
Ring light length	RL	41.5	
Focal distance, working distance	FA	80	80
Light spot diameter	FØ	25	30
Number of light spots, resolution	PR	24	15
Light emission	KØ	0.5	0.7
Light guide length, supply in cm	0130		211462
	0300	219007	

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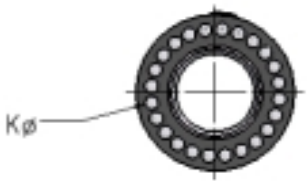
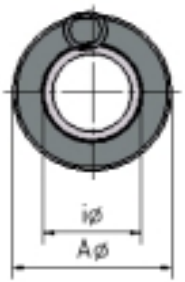
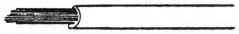
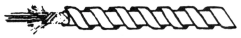




Light supply line sheath depending on application

MP- protective hose	**MP**
Material	Aluminium with plastic covering
temperature	-20°C to +80°C
Colours	black
Properties	very flexible, high tensile with high peak compressive strength

Flat cable coil - silicone protective hose	**MS**
Material	Protective hose stainless steel with silicone rubber sheath
temperature	-60°C to +180°C
Colours	grey
Properties	Silicone rubber sheath can be sterilised, is water-tight, and to a large extent resistant to chemicals and solvents, is stress-relieved and very flexible.

PVC hose	**PC**
Material	Polyvinylchloride (PVC)
temperature	up to approx. 70° C
Colours	black

Stainless steel protective hose	**VA**
Material	Stainless steel 1.4301
temperature	600°C
Colours	dark grey
Properties	Media resistance conforms to 1.4301 material

Alu- protective hose	**AL**
Material	Aluminium
temperature	-60°C to +180°C
Colours	silver
Properties	anti-kink protection

Decabon pipe	**DK**
Material	Interior pipe made of double-sided coated overlapping aluminium foil, exterior sheath made of high density polyeurathane (HD-PE)
temperature	-25°C to +65°C
Colours	black (standard)
Properties	It can be easily formed by hand, retains its shape and does not spring back. It can be bent several times without damage.

PE protective hose	**PE**
Material	PE protective hose
temperature	-0°C to +80°C
Colours	black
Properties	resistant to acids, alkalis and salt solutions / break and impact resistant

Tecalan protective hose	**TC**
Material	Tecalan
temperature	For continuous load -60°C to +100°C, for short-term loading to +130°C
Colours	black

PU protective hose	**PU**
Material	Electrical discharge protective PU hose
temperature	-40°C to +80°C
Colours	black, blue, white
Properties	High rupture stress, very good stability against cold, oils, fats, acids, alkalis and salt solutions; hardness: Shore A 98 Working pressure, temperature dependent! 12bar at 24°C 5bar at 66°C

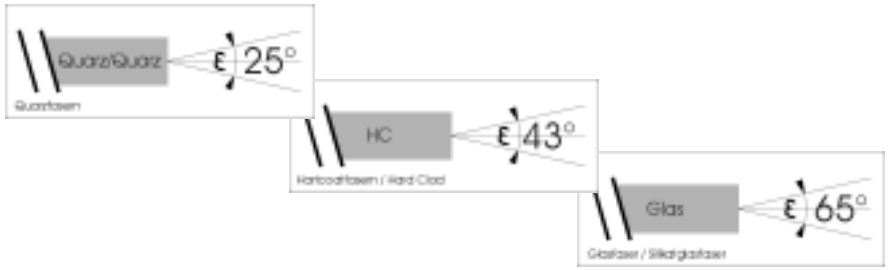
PTFE coiled hose	**PTFE**
Material	PTFE coiled hose with glass fibre braiding
temperature	-70°C to +260°C
Colours	black
Properties	non-flammable, chemical resistant

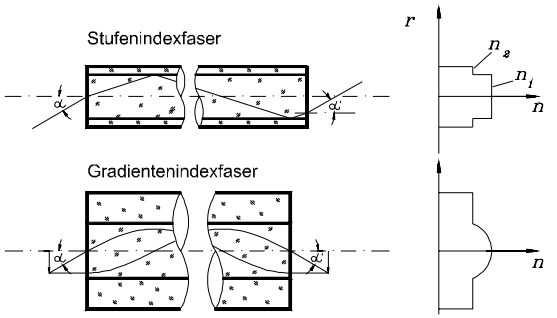
Silicone hose	**SL**
Material	Silicone hose
temperature	-60°C to +200°C, short-term +260° C
Colours	grey, black, transparent
Properties	very flexible, acid and alkali resistant, Shore hardness A 55 ± 5°, autoclavable, ethylene oxide, light scent, non-toxic

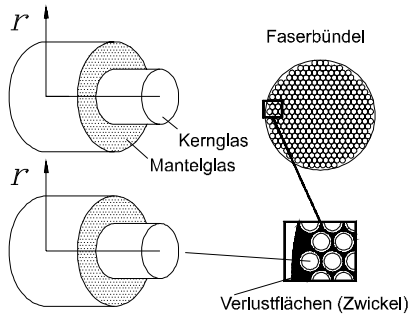
PVC hose with fabric insert	**GPVC**
Material	PVC hose with natural fabric insert
temperature	-20°C to +65°C
Colours	transparent
Properties	permanently transparent, comfortable flexibility, good aging resistance, KTW approved, food materials approved according to RAL-E71

Fibre type	Acrylic fibre (Polymer Optical Fibre)	Glass fibre silicate glass fibre	Hardcoat fibre hard clad	Quartz fibre	Quartz fibre
Profile	Index step fibre (Si)	Index step fibre (Si)	Index step fibre (Si)	Index step fibre (Si)	Gradient fibre (Gi)
ØD Fibre exterior diameter	250µm 500µm 750µm 1000µm	30µm 50µm 70µm	125µm 225µm 425µm 630µm	155µm 250µm 270µm 415µm	125µm 140µm
Ød Fibre core diameter	240µm 490µm 740µm 990µm	27µm 47µm 67µm	100µm 200µm 400µm 600µm	105µm 200µm 200µm 320µm	85µm 100µm
NA Numerical Aperture	0.47	0.54	0.37	0.22	0.2
2α=ε Light exit angle	56°	65°	43°	25°	~25°
% Damping losses	200dB/km 3.4%/m at 580nm	200dB/km 4.5%/m at 820nm	10dB/km 0.002%/m (at 820 nm)	≥14db/km at 820nm	1dB/km at 13000nm
C° Temperature resistance	92	600	125	300	125

Light**exit**angle **ε** for various fibre materials







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