
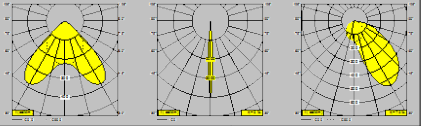



Price List for Photometrical Measurements

As per: 01.01.2012
exclusive 19% VAT

Quick Service:

On demand you receive the results within 24 hours, provided it is technically possible.
We charge an additional mark-on of 100%.


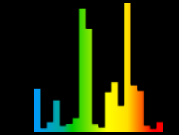

A	Luminous flux, Lumen (lm) > Measurement according to EN 13032-1 > Measurement of any lamp types > Uncertainty of measurement (with $k = 2$) max. $\pm 5,0 \%$	
A1	Measurement of luminous flux for non-directional lamps	285.00 €
A2	Determination of the Energy-Efficiency class according to EU-Regulation 98/11/EC (Measurement of 1 lamp)	300.00 €
A3	Determination of Energy-Efficiency class according to EN 50285 (Measurement of 20 lamps on the same type) according to EU-Regulation 98/11/EC	4.700.00 €
A4	Determination of the ecodesign properties for non-directional household lamps according to EU-Regulation 244/2009 (price is charged for one lamp measurement)	950.00 €
B	Luminous intensity distribution, Candela (cd) > Measuring method according to EN 13032-1 > Photometric results as LDT or IES file > Uncertainty of measurement (with $k = 2$) max. $\pm 8,0 \%$	
B1	Direct or indirect luminaire (also with LED source) with total weight < 5 kg: Absolute measurement of lower hemisphere up to $\gamma = 90^\circ$, LOR = 100 %	425.00 €
B2	As B1 but total weight of fixture $\geq 5,0$ kg	575.00 €
B3	Direct and indirect luminaire (also with LED source) with total weight $\geq 5,0$ kg: Absolute measurement of both hemispheres up to $\gamma = 180^\circ$, LOR = 100 %	640.00 €
B4	As B3 but total weight of fixture $\geq 5,0$ kg	865.00 €
BF	Discount for subsequent measurement on B1, B2, B3 or B4 measurement	on request
C	Light output ratio, LOR (%) > Additional to measurement B1 – B4 > Necessary for relative photometry > Measuring method according to EN 13032-1	LOR = ... %
C1	Renting a lamp luminous flux which is already measured by DIAL (price is charged for each luminaire measurement)	50.00 €
C2	Measurement of Luminous Flux on customer specific lamp/gear (afterwards valid for 12 months)	240.00 €
D	MINERGIE® Measurements > According to S.A.F.E - method (Switzerland) > Uncertainty of measurement (with $k = 2$) max. $\pm 8,0 \%$	
D1	MINERGIE® Measurement of luminaire with direct or indirect light and fluorescent or compact fluorescent lamp(s)	1250.00 €
D2	MINERGIE® Measurement of luminaire with direct and indirect light and fluorescent or compact fluorescent lamp(s)	1465.00 €
D3	MINERGIE® Measurement of luminaire with direct or indirect light and LED source	635.00 €
D4	MINERGIE® Measurement of luminaire with direct and indirect light and LED source	860.00 €
DF	Discount for MINERGIE® subsequent measurement on D1, D2, D3 or D4 measurement	on request

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E	Emergency lighting fixtures > Measurements according to EN 1838, ISO 3864-1 and DIN 4844-1 > On request imaging analysis is also possible	
E1	Absolute* luminances [cd/m ²] and colour-coordinates x, y (CIE 1931 chromaticity diagram) on the emergency sign surface * If standardised luminance values [cd/m ² /klm] are requested, one additional measurement A1 is necessary	620.00 €
E2	Subsequent measurement to E1: Other surfaces and pictograms	520.00 €
F	Colorimetric measurements > According to CIE 1996 and DIN 6169-2 > Spectral resolution 1 nm	
F1	> spectral distribution of any lamp types in a band of 380-780 nm > documentation of correlated colour temperature in Kelvin [K] > determination of colour rendering index CRI	210.00 €
F2	Package price A1 and F1 Measuring of luminous flux and spectral distribution	445.00 €
G	Reflectance ρ and transmittance τ > According to CIE 38 and DIN 5036-3 > Measurement with CIE standard illuminant A or D65	
G1	Determination of the scattered and total grade of reflectance ρ or transmittance τ for one pattern* under 8° light direction. *Pattern dimension min. 10 x 10 cm	800.00 €
G2	Subsequent measurement to G1: Reflectance or transmittance for additional patterns under 8° or additional angles on the same pattern (20°, 30°, 40°, 50°, 60°, 70°).	700.00 €
H	Order processing and additional services	
H1	Order processing (per order)	155.00 €
H2	Derivation of photometric files on original measurement (only for identical lighting fixtures, identical lamp geometry and approximately same optics), per LDT or IES file	110.00 €