Crystal30

4TH GENERATION
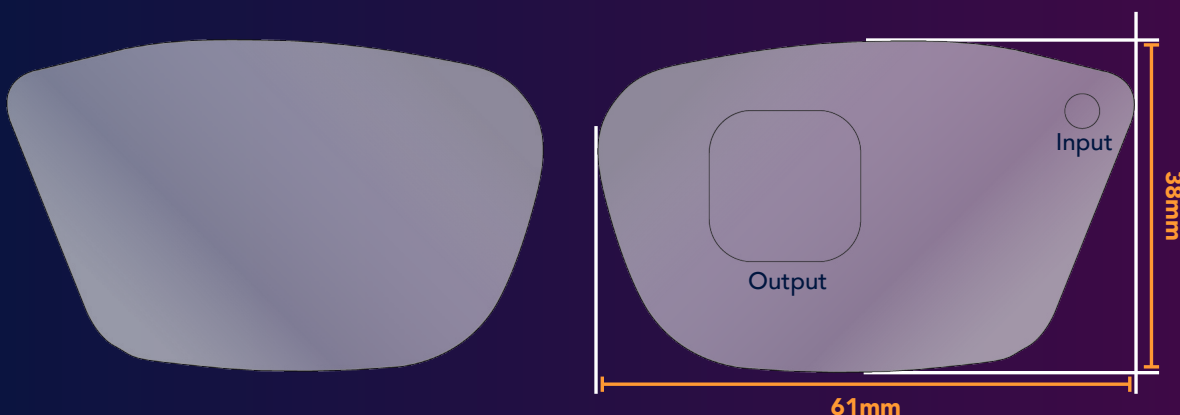
Lightweight and Consumer Ready

The DigiLens Crystal30 4th generation waveguides are engineered for seamless integration into smartglasses, smart helmets, and other headworn XR devices. Designed to overlay digital data onto the physical world, these waveguides deliver industry-leading performance for consumer, enterprise, and industrial applications.

AVAILABLE NOW
sales@digilens.com

KEY FEATURES

- Exceptional Image Quality: Delivers high-resolution, vivid imagery
- Market-Leading Brightness and Efficiency: Among the brightest and most energy-efficient waveguides available
- Ultra-Low Eye Glow: Achieves the lowest measured eye glow in its class, ensuring user privacy and comfort
- Versatile Integration: Compatible with a wide range of light engines to meet diverse customer requirements
- Scalable Manufacturing: Supported by DigiLens' global licensee network, enabling high-volume, cost-effective production to meet market demand

Input
Output
38mm
61mm

Values are rounded for summary purposes

Specifications

FIELD-OF-VIEW
30° (D)

ASPECT RATIO
[1:1]

EYE BOX
12mm (H) x 10mm (V)

TRANSPARENCY
>92%

EYE RELIEF
17mm

ANSI CONTRAST
>60:1

THICKNESS
1.2mm

WEIGHT
6g

PROJECTOR PUPIL SIZE
2.4MM TO 4.0MM [3]

Waveguide compatible with both unpolarized (µLED/DLP) and polarized (LCoS) projection engines

	UNPOLARIZED (n/L)	POLARIZED (n/L)
AVG LUM EFF [2]	>900n/L	>1,800n/L
PEAK LUM EFF [2]	>1,500n/L	>3,000n/L

Measurements per Information Display Measurement Std (IDMS)[1]

[1] Average field, center eye box

[2] Alpha grade

[3] Input coupler size/position can be optimized to match projector pupil

Crystal30 | InsightKit

4ᵀᴴ GENERATION

Quickly create and see your content with the Insight module. Start your evaluation journey today.

Avegant AG-30L2 Projectors

Crystal30 Waveguides

334mm

184mm

Binocular Insight module shown
Monocular version available

What's in the kit

- Insight frame with Crystal30 waveguide* and Avegant projector† module
- Driver board (USB-C)**
- Mobile phone preloaded with Avegant app and demos‡
- Storage case

Specifications (waveguide + projector)

OPTICS (WAVEGUIDES)
Crystal30G4

FIELD-OF-VIEW
30° (D); Aspect ratio [1:1]

MAX BRIGHTNESS
>3,000 nits to eye

EYE BOX
12mm (H) x 10mm (V)

EYE RELIEF
17mm

EYE GLOW
5%

PROJECTORS
Avegant LCoS
AG30L2 [L&R]

RESOLUTION
720x720p

FRAME RATE
60fps

MTF/SHARPNESS
>40% @ 17ppd

ANSI CONTRAST (WAVEGUIDE)
>60:1

COLOR BALANCE (WAVEGUIDE)
du'v' <0.05 RMS

* One waveguide for monocular; 2 waveguides for binocular
** Binocular only
† Right eye for monocular; right and left eye for binocular
‡ SDK may be requested

To purchase, contact sales@digilens.com