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## AR Smartglass Supplier Partnership to deliver the next generation of AR wearables



#ARSMARTGLASSES

# STRATEGIC SUPPLIER

PARTNERSHIP FOR MICRODISPLAYS

WaveOptics, the pioneering designers of diffractive waveguides for Augmented Reality (AR) wearables, has announced a strategic supplier relationship with Jade Bird Display (JBD) for MicroLED microdisplays.

The *Leopard* is the latest development kit by WaveOptics which demonstrates to their customers the advanced level of readily deployable and customisable AR technology.

It is the closest form-factor akin to traditional consumer eye wear available from the UK based company which recently was acquired by [Snap Inc.](#) Alongside the patented waveguide technology, the Leopard utilizes JBD's 0.13" [AmμLED™ MicroLED panel](#) incorporated into a WaveOptics designed projector.



*Fig 1. Leopard demo glasses by WaveOptics*

#### UNLOCKING THE NEXT CONSUMER ELECTRONICS REVOLUTION

This is the first time WaveOptics have selected a uLED panel for their light engines. *Dr. Qiming Li, CEO & founder of JBD says "We are delighted to be a partner in the launch of Leopard which is a truly innovative optical hardware platform enabling light weight and outdoor readable AR wearables designs".*

Leopard uses the Katana waveguide platform which was launched at CES 2020. It is the [thinnest and lightest waveguide](#) available: only 1.15mm thick, weighing just 7 grams. It combines with Loki, the WaveOptics designed projector (incorporating JBD's uLED panel) weighing just 0.6 grams and volume 760mm<sup>3</sup> which fits into the housing of the glasses for ease of assembly and style. The 0.13" VGA MicroLED display from JBD has an active area of only 2.64 mm x 2.02 mm, capable of achieving brightness of over 4 million nits. This enables the ultra-efficient, super bright and small form factor design of the Loki.

#### IDEALLY DESIGNED FOR SIMPLE ALERTS AND MESSAGING

This unique combination allows user experience testing of green only, monocular smart glasses, suitable for notification-based use cases.



Fig 2. Illustrative use case of notifications for sport by JBD.

JBD shares the mission to design technology that is suitable for customization and mass manufacture.

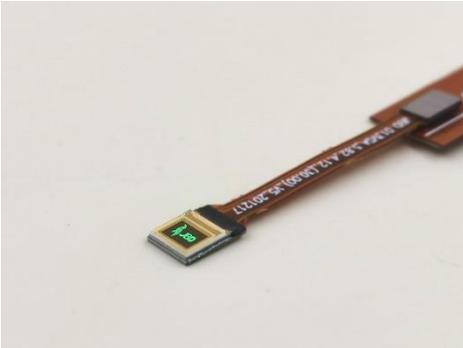
**WORKING IN PERFECT SYNC TO DELIVER THE NEXT GENERATION OF AR DEVICES**

*Dr Qiming Li goes on to say “It is critical that the see-through optics and microdisplay for AR wearables is considered for compatibility at the very inception of design rather than in isolation. Our MicroLED microdisplays and Waveoptics’s Katana waveguide work in perfect sync to deliver the next generation AR wearable devices and we will continue working with Waveoptics in future developments to fuel further innovations.”*

**TECHNICAL SPECIFICATION**

The Leopard comprises of Asgard waveguide outline, Loki projector, Bodach and glasses form factor.

Parameter	Description
Module Type	Loki projector and Asgard outline on the Katana waveguide platform  

Projector Type	Loki using JDB uLED 
Field of View:	27° diagonal
Weight	0.6 grams
Dimensions	8.2mm x 8.8mm x 10.5mm - volume 760mm <sup>3</sup>
Display:	AmuLED™ Panel VGA (4x3) 640 x 480 
Resolution:	29 pixels per degree
Colour:	Green only – 4 Bit green (16 shades)
Monocular	Right eye only
Standalone device	Untethered. Fitted with Bodach electronics in the right arm and an 95mAH battery in the left arm

**“TRY ON” THE NEW LEOPARDS USING AR LENS**

Another first for WaveOptics is the ability to try this developer kit from anywhere in the world.



## **WO Leopard** by gillian

*Fig 3. Lens created by Gillian, Product Developer Intern in the Mechanical Design Team at WaveOptics.*

Simply open Snapchat and take a photo of the code to unlock the Lens or [open on your mobile here](#).

###END###

### **About WaveOptics**

WaveOptics unlocks the potential of augmented reality wearables for the mass market. For more information visit WaveOptics [website](#), [LinkedIn](#) or [Twitter](#) pages.

### **About Jade Bird Display**

Founded in 2015, JBD has been focusing on developing the smallest, brightest, and most efficient micro-display panels. With a fab established in Shanghai China, JBD is considered as one of the leaders in microLED display technologies with its portfolio of active matrix microLED displays. For more information, visit JBD's [website](#), [LinkedIn](#) or [Twitter](#) pages.

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