

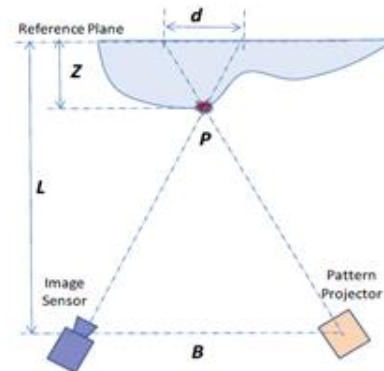
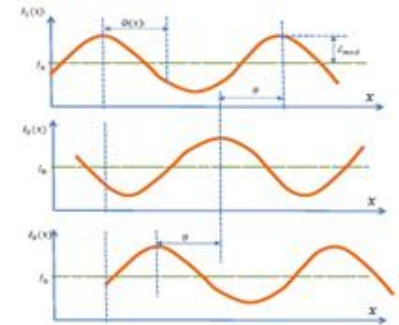
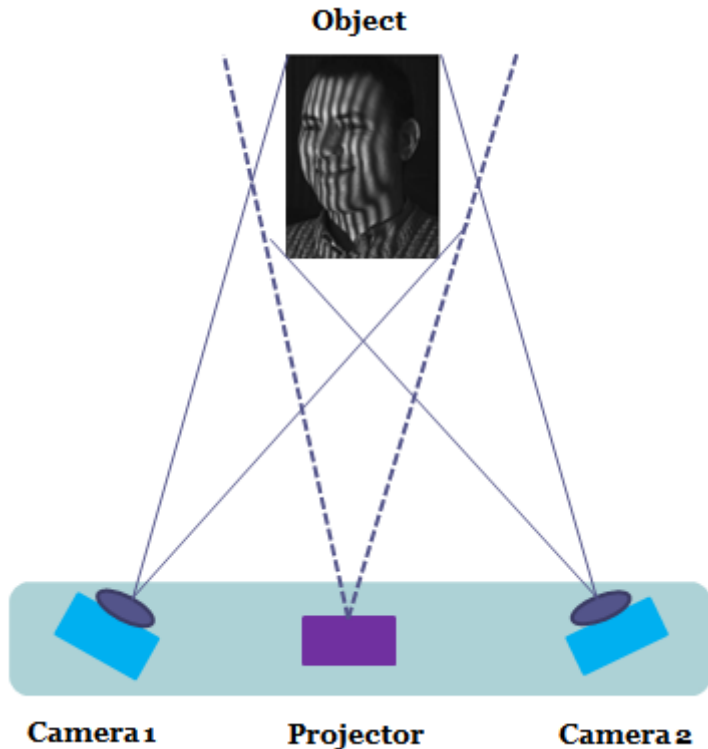
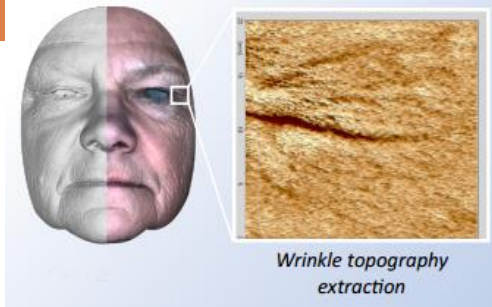
# HaanVision

- Mission
  - ▣ Artificial Intelligence & Computer Vision Algorithm R&D for Embedded System
  
- Business Area
  - ▣ Smart Factory
  - ▣ Autonomous Navigation
  - ▣ Health Care
  
- Technical Portfolio
  - ▣ Embedded Computer Vision
    - Machine Vision for Inspection
    - intelligent Surveillance
    - Optical System Configuration & Calibration
  - ▣ Artificial Intelligence
    - Pattern Recognition & Signal Processing
    - Machine Learning/Deep Learning
    - Ontology/Inference Engine/Planning
  - ▣ 3D Reconstruction & Modeling
    - 3D face Recognition & Modeling

# Company Info.

- History
  - 2014 Established
  - 2016 Seoul Research Center
  - 2017 South Korean Governmental R&D Project
  
- Location
  - ▣ Woomyeondong Seochogu Seoul city, Republic of Korea
  
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  - [www.haanvision.com](http://www.haanvision.com)
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- Customer
  - ▣ SEC Co. Ltd. - SEC, Oppo, IBM
  - ▣ Optobiomed Co. Ltd.

# High Resolution 3D Smart Mirror



$$\frac{Z}{L-Z} = \frac{d}{B}, \quad \text{or} \quad Z = \frac{L-Z}{B} d$$

$$Z \approx \frac{L}{B} d \propto \frac{L}{B} (\Phi - \Phi_0)$$

# Projector module

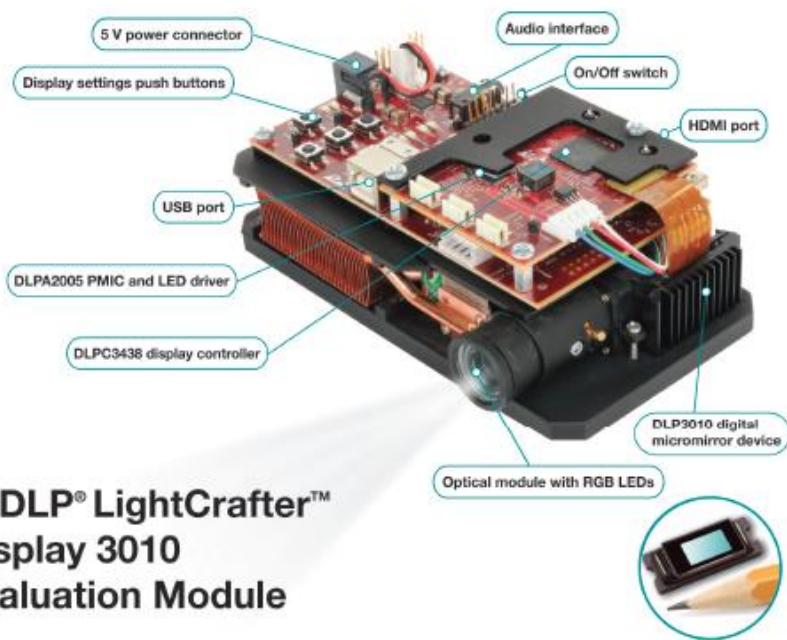


Table 1. Optical Engine Specifications

PARAMETER	MIN	TYP	MAX	UNIT
Brightness		125		Lum
LED Current		2.4		A
Brightness Uniformity	75%			
Throw Ratio		1.2		
Offset		100%		
Focus Range	5		50	inch
Image Diagonal Size	5		50	inch

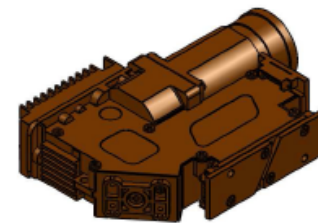
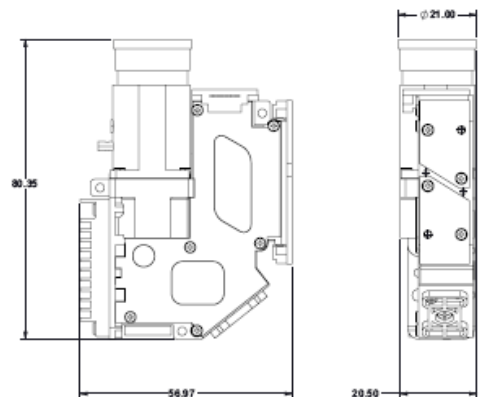


Figure 3.

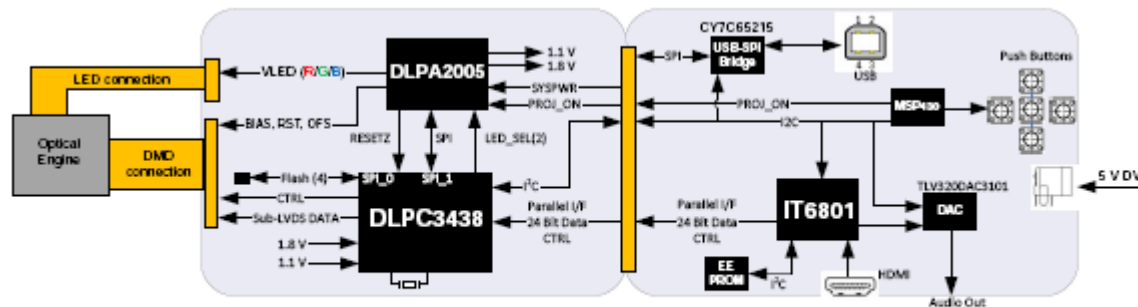


Figure 2. DLP LightCrafter Display EVM Block Diagram