NEW STATE OF EYEWEAR MANUFACTURING

Seminar in MIDO 2023 OTTICLUB

4 February 2023 4:30pm - 5:30pm

Organizer

HONG KONG OPTICAL MANUFACTURERS ASSOCIATION LTD.
香港中華眼鏡製造廠商會有限公司

Implementation organisation

hkpc

Funded by Trade and Industrial Organisation Support Fund, Trade and Industry Department

TSF 工商機構支援基金 Trade and Industrial Organisation Support Fund

Supporting organisation

EYEWEAR DESIGNER CLUB
HONG KONG EYEWEAR DESIGNER CLUB 香港眼鏡設計師會

Disclaimer: "Any opinions, findings, conclusions or recommendations expressed in this material/event (or by members of the project team) do not reflect the views of the Government of the Hong Kong Special Administrative Region or the Vetting Committee of the Trade and Industrial Organisation Support Fund."

Invite

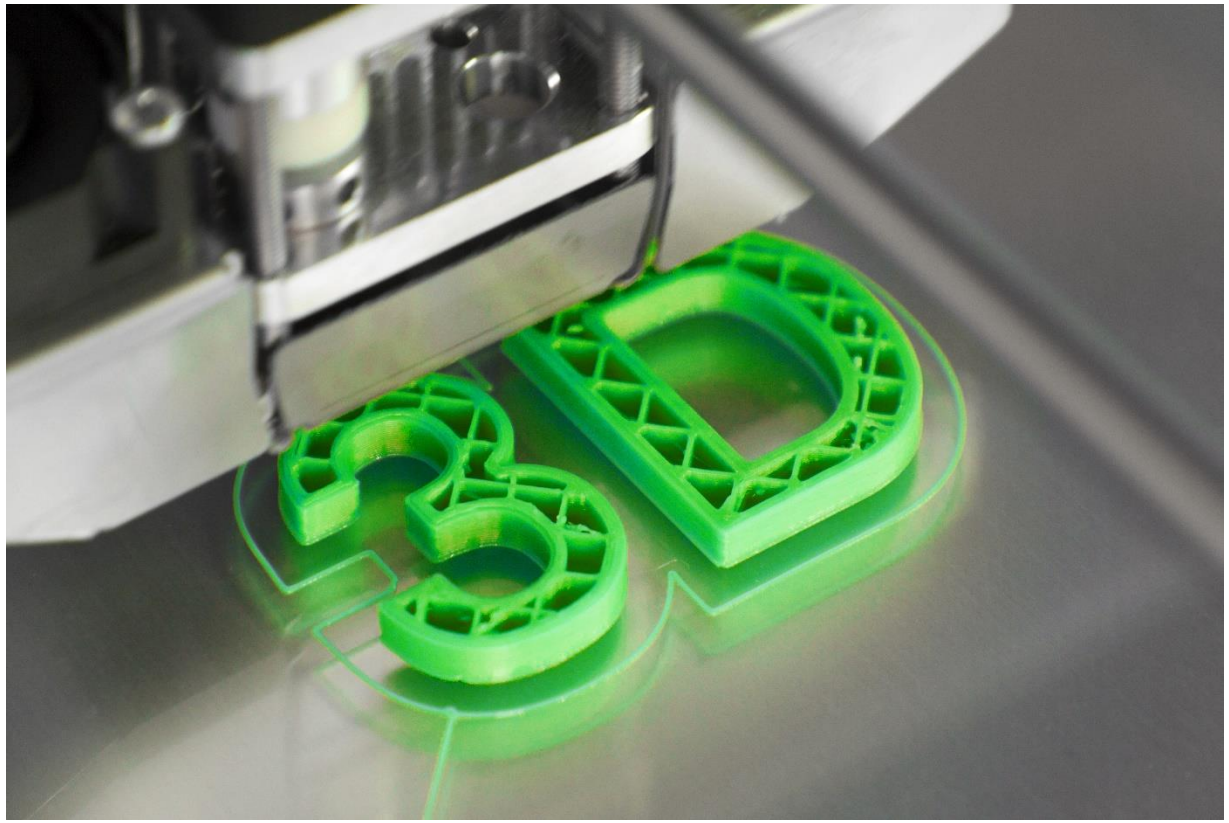
- **Mr. Evan Tse**

Hong Kong Optical Manufacturers Association (HKOMA)

President

For Information Sharing

Innovative eyewear, hinge solutions for 3D printing eyewear and smart-glasses.



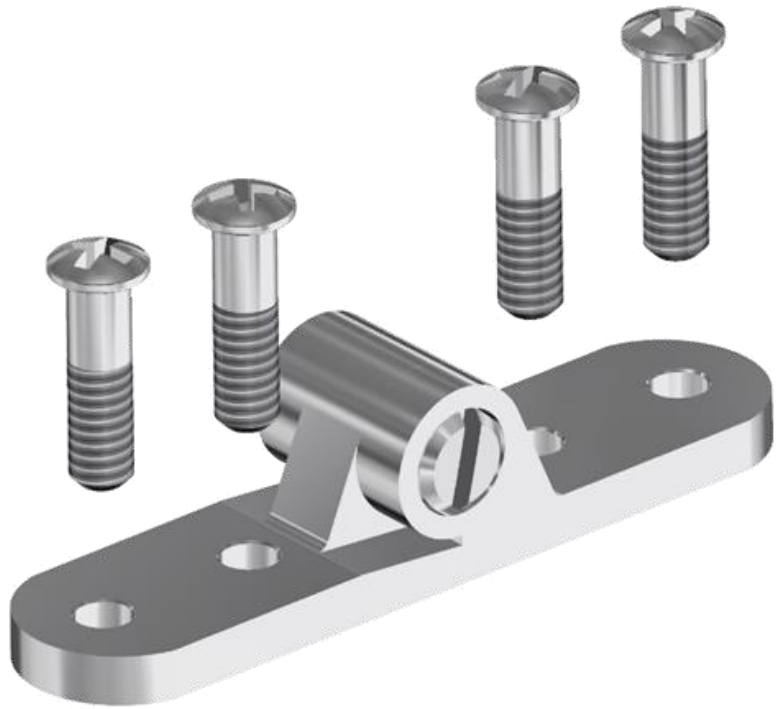
Hinge solutions for 3D printing and smart-glasses

90% mechanical hinge connection

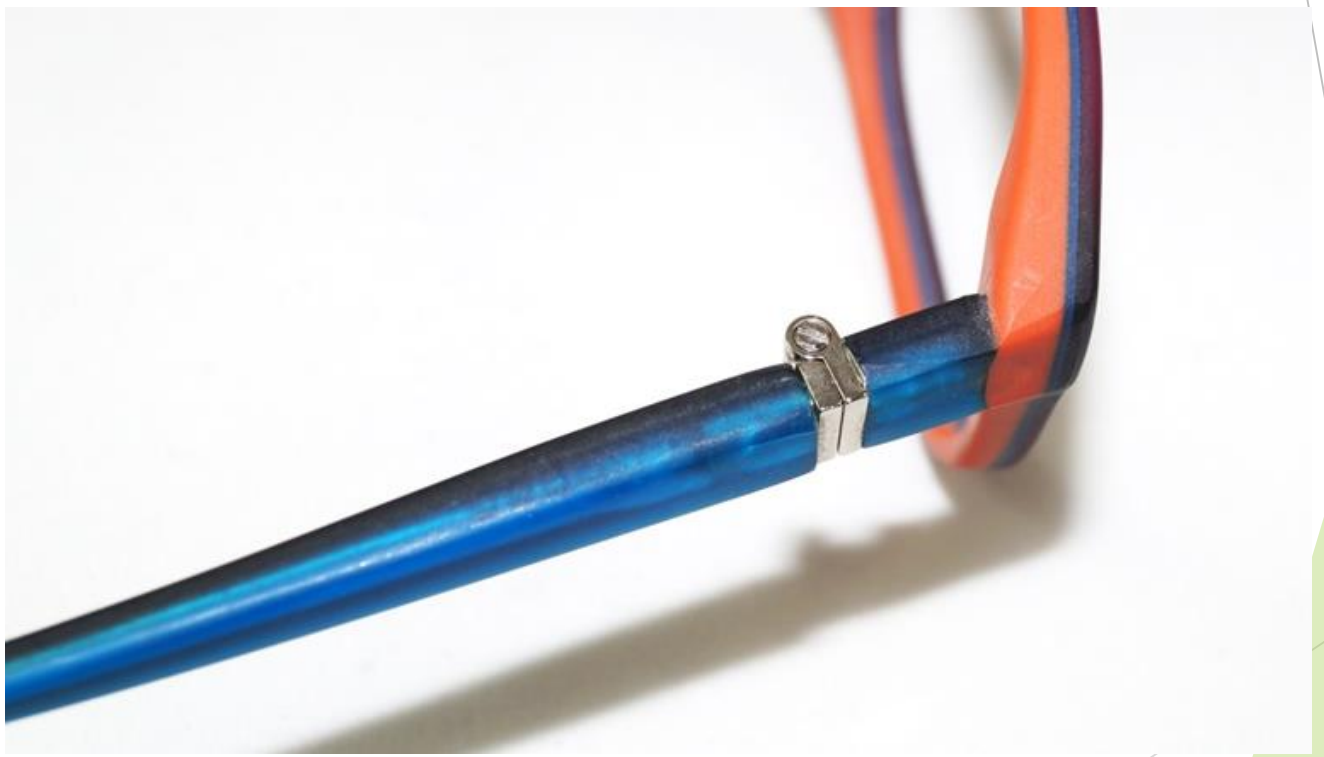
Hinge solutions for 3D printing and smart-glasses

Example non flex → Rivet hinge to be screwed
Hinge connection to 3D material by screw

→ Good & safe connection → easy to disassemble



Examples non flex: Lip hinge
Discrete positioning of fixing screws



ARTICULATION: non flex with special screw
→ movement control recommended through plastic coated screws which compensate the tolerance

Examples hidden flex

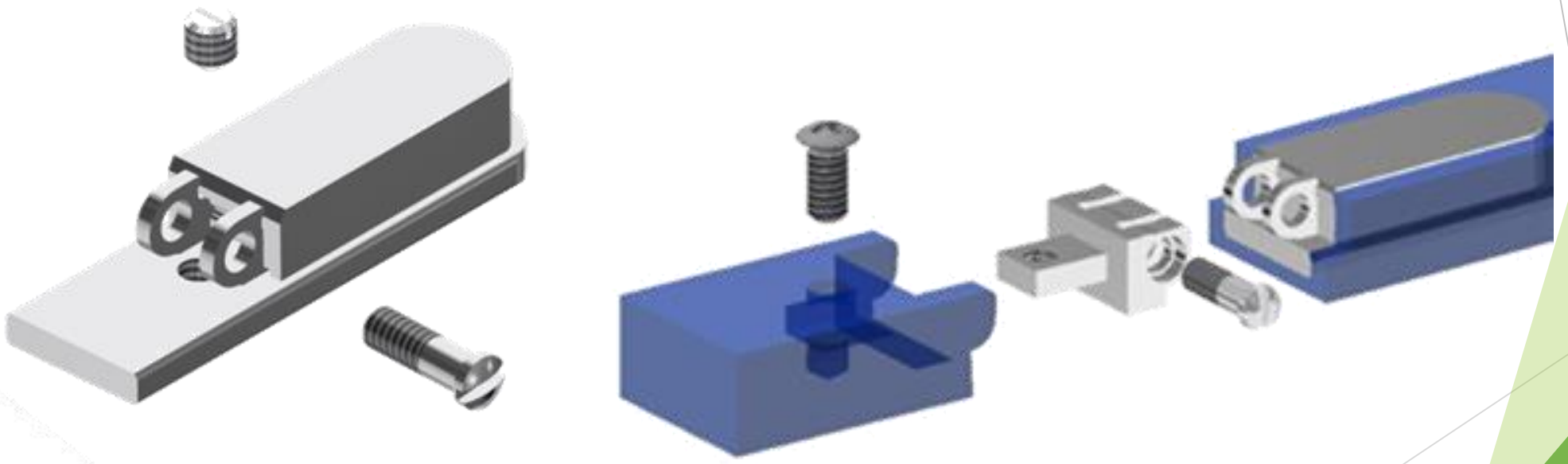
→ one barrel construction /also available in 2 barrels

→ due to abrasion of material contact → often no extension needed in 3D printed frames

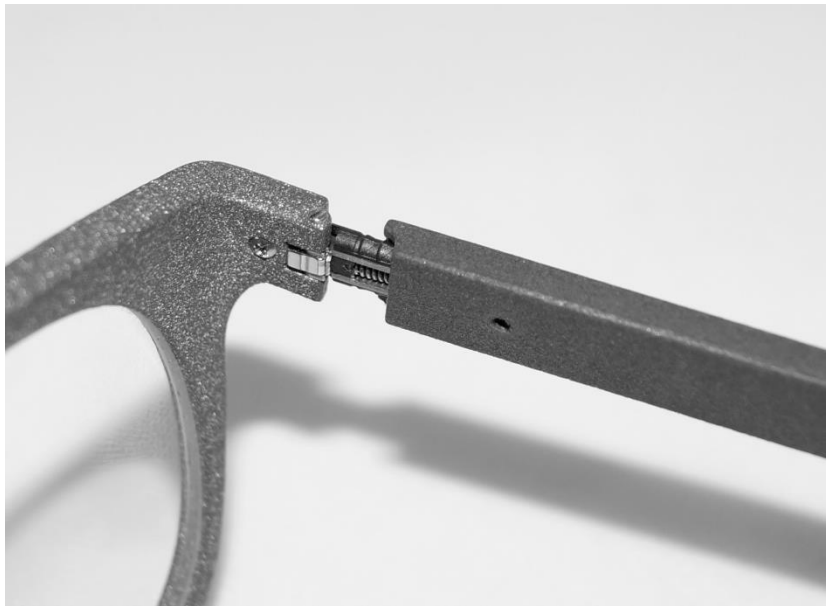
Examples semi hidden flex

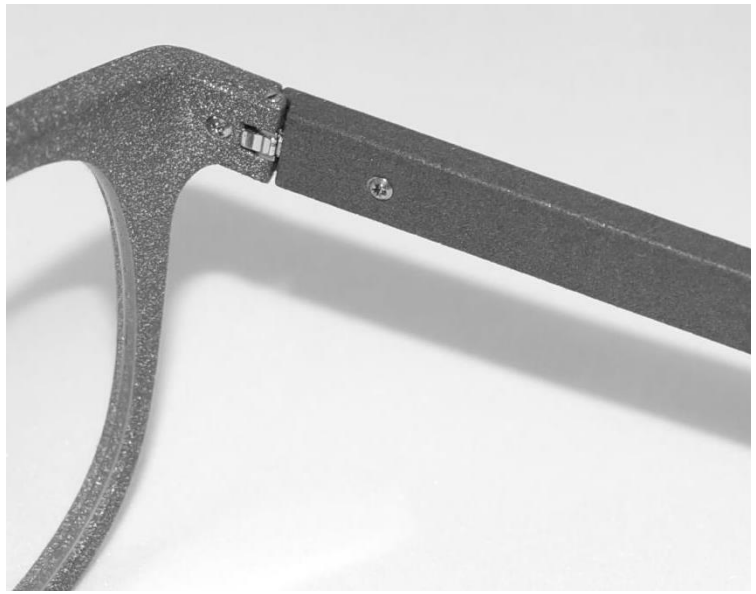
→ metal surface on the same level as 3D printed temple

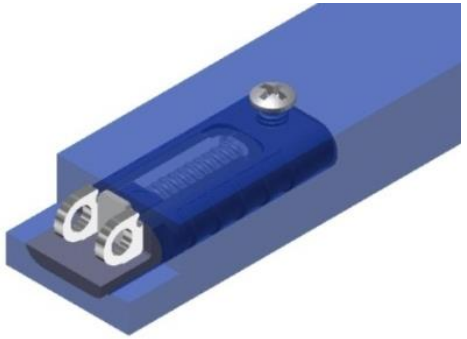
→ connection with screw in temple and front

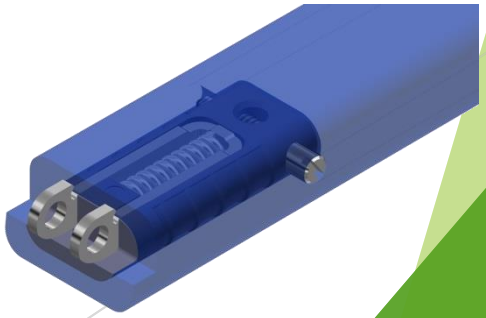


Integrated carbon flex
→ double barrel construction avoids rocking
→ 100% recycled carbon carrier



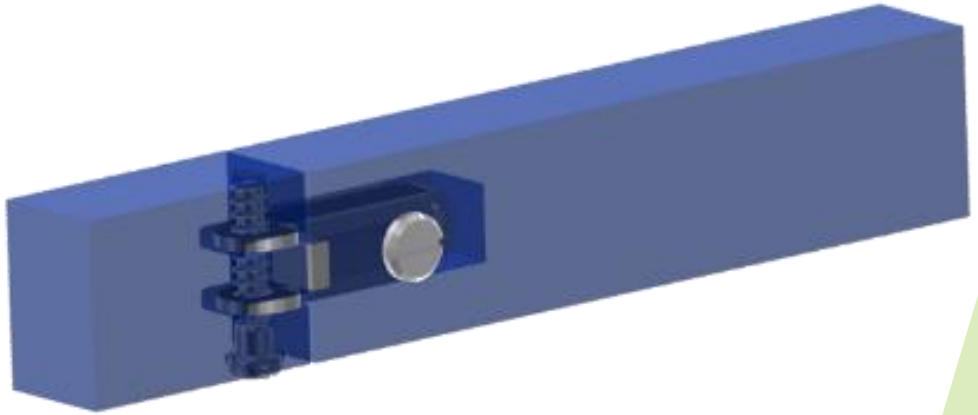




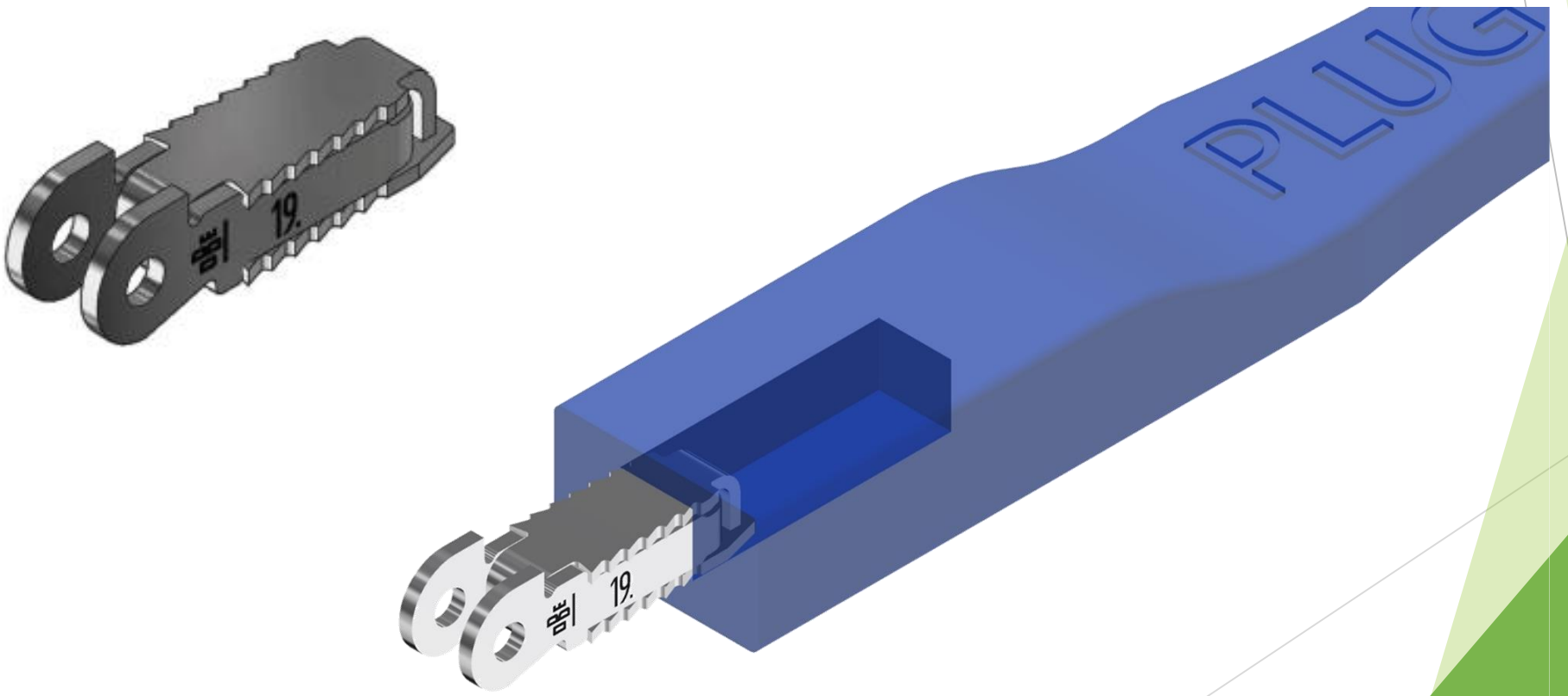


Short metal flex

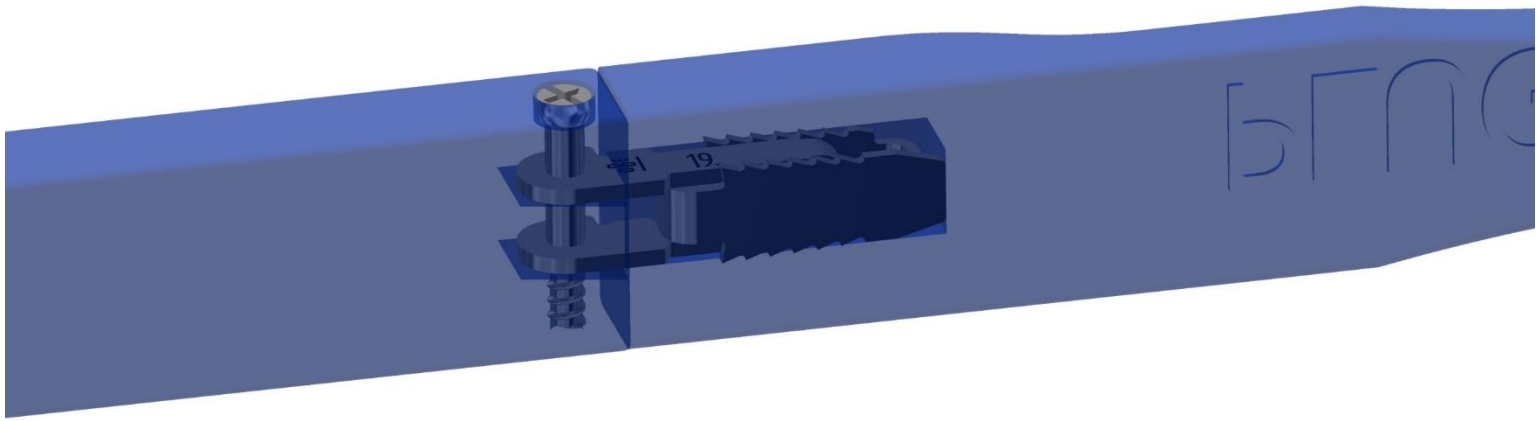
→ Connection by screw on the top
→ double barrel construction avoids rocking
→ Direct joining into temple possible



Metal flex Plug & flex
→ No screw connection – Easy assembling by clinching



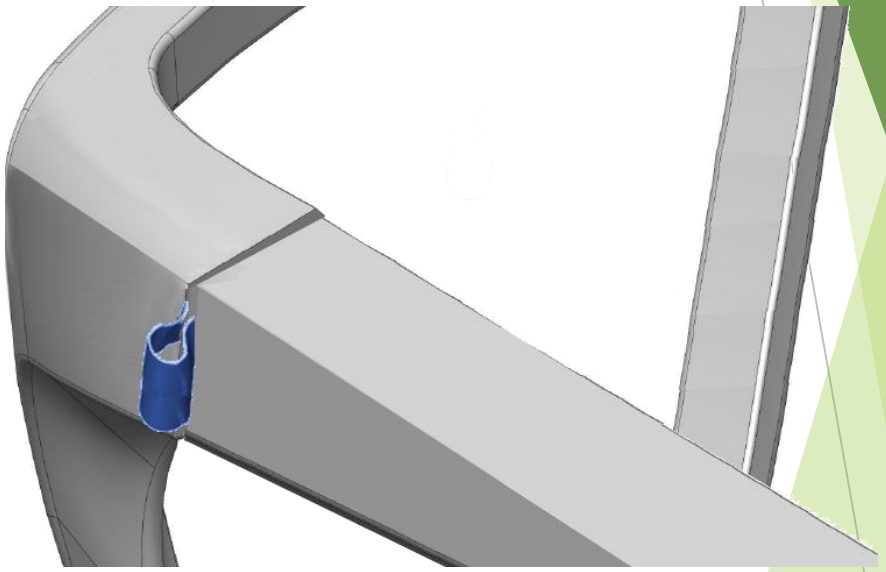
Metal flex: Plug & Flex
→ Direct joining screw replaces a front hinge

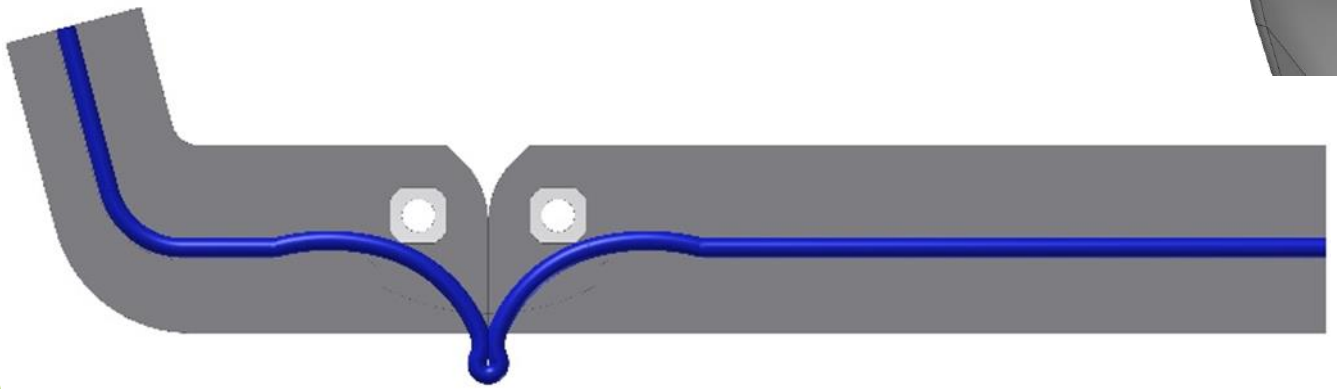


Temples with front hinges to be screwed into 3D front

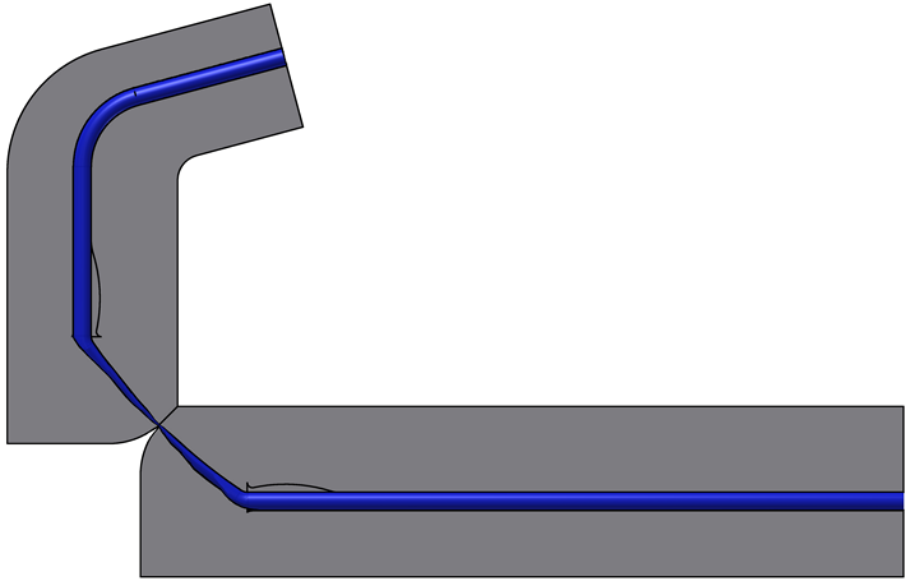
Examples of combination 3D & metal frames

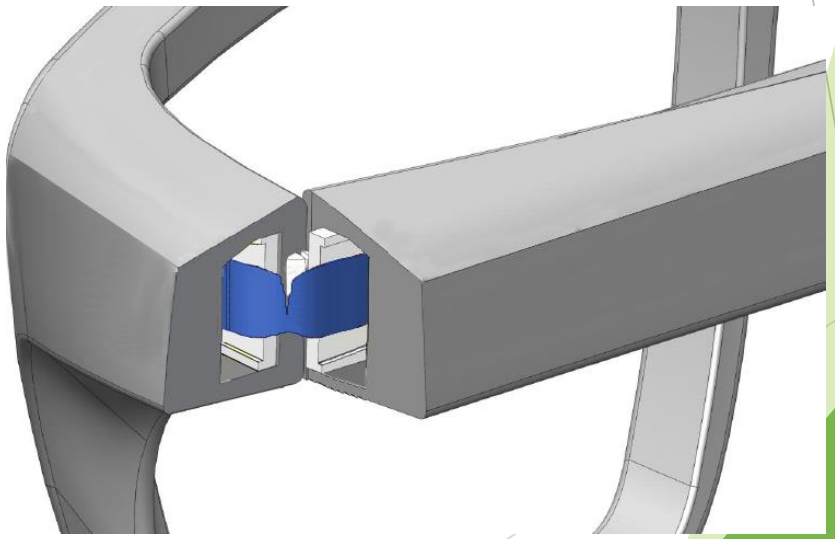
The following problems occur:
Either the cable is too long in the open temple position…





…or the cable gets to short in the closing positions.





If data is transferred between temple and front of the smart glasses, the hinges play a major role for a perfect Smart functionality as a cable has to be transferred

Source: Adobe Stock /© SasinParaksa

Invite

- Mr. Kenny Kwok
  Director Kelfred Holdings Ltd.

For Information Sharing

WE ARE

- Kelfred Optical Ltd. was founded in 1986 ,we are an established eyewear manufacturer in the PRC and Hong Kong that produce and sell a wide range of spectacle frames and sunglasses mainly through ODM and OEM business models.
- 1,200 workers in Asia.
- Produced 5.8Million eyewear pieces last year.

KELFRED
OPTICAL LTD
Manufacturer Exporter

3D printing eyewear

- This technology has been around for 20 years, but never really use it in eyewear industry
- 3D design drawings
- 3D print eyewear samples

Advantages

- Reduce dependence on hand made prototypes
- Shorten the lead time by 3D printing
- Use 3Ds to do advertising

AI eyewear for eyewear manufacturing?

- AI automatically generate eyewear design
- New generation for the future

Advantages

- For building up the eyewear brands, fashionable eyewear design with complete stories

Sustainability

- Sustainability is a MUST for eyewear industry

Projection

- In 2026, all eyewear collection will be done in sustainability material

- In 2030, only using factory with sustainable energy

That’s the future for eyewear materials

THANK YOU!

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