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Chen et al.(10) **Pub. No.: US 2024/0214530 A1**(43) **Pub. Date: Jun. 27, 2024**(54) **PROJECTION APPARATUS**(71) Applicant: **Coretronic Corporation**, Hsin-Chu (TW)(72) Inventors: **Shang-Wei Chen**, Hsin-Chu (TW);
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(57)

ABSTRACT

A projection apparatus includes an illumination system, a prism assembly, a first light valve, a second light valve and a projection lens. The illumination system includes a blue light emitting element, a red light emitting element, a wavelength conversion device, a dichroic assembly, a first light diffusing element and a second light diffusing element. The second light diffusing element has a diffusion area and a non-diffusion area. The diffusion area is located on a transmission path of a blue beam from the dichroic assembly, and the non-diffusion area is located on a transmission path of a green beam from the dichroic assembly. The prism assembly has a dichroic film. The dichroic film is configured to transmit a red beam to the first light valve. The dichroic film is configured to transmit the green beam and the blue beam to the second light valve.

