

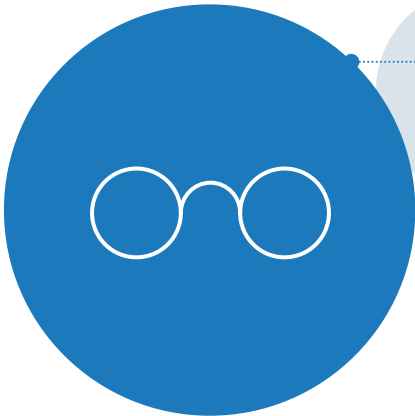


Conventional vision assistive technology

8,133

patent families for conventional vision assistive technology filed across **53 patent offices**

What technologies are involved?



Spectacles
4,251 (52%)



Tactile devices
2,241 (28%)



Magnifiers
1,329 (16%)



Interactive products
396 (5%)

Which are the fastest growing technologies?

Fillings related to **interactive products** marked an average annual growth rate of **27%** between 2013 and 2017

Fillings related to **tactile devices** increased by an average of **14%** between 2013 and 2017

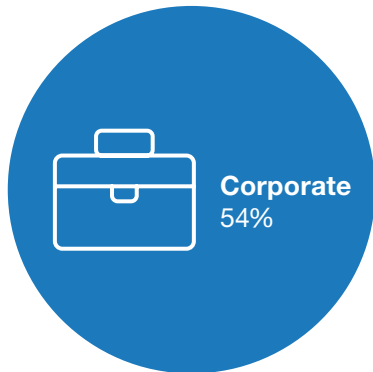
“ **24%** of conventional vision-related inventions are **filed for protection in more than one jurisdiction**, indicating applicants’ interest in several markets

Who is filing?

Applicant sector



Individuals
35%



Corporate
54%



Academia
10%

Top patent applicants

Seiko Group (Japan)	158
Essilor (France)	140
Hoya (Japan)	129
Johnson & Johnson (U.S.)	108
IBM (U.S.)	68

Major optics manufacturers are researching advanced technologies to develop specialized electronic lenses. Players from the mobile and computing industries are innovating mainly in the areas of tactile devices and interactive products.