

ABSTRACT

The present invention provides a high performance liquid immersion type lens system that can be stably used over a long time period and a projection exposure apparatus provided therewith. Consequently, the liquid immersion type lens system of the present invention includes: an optical system main body 30 that has an optical surface 33a at one end along an optical axis, the optical surface 33a contacting a first immersion liquid IL1; a light transmitting member 42 that has two surfaces, one on each end along the optical axis, is disposed opposing the optical surface 33a of the optical system main body 30, one 42a of the two surfaces contacting the first immersion liquid IL1, the other 42b of the two surfaces contacting a second immersion liquid IL2; and a holding member 41 that detachably supports the light transmitting member 42 so that the one surface 42a opposes the optical surface 33a of the optical system main body 30. In addition, the projection exposure apparatus of the present invention includes such a liquid immersion type lens system.