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Osaka

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(54) **EXCITATION LIGHT SYNTHESIZING UNIT,
LIGHT SOURCE UNIT, AND
PROJECTION-TYPE DISPLAY APPARATUS**

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See application file for complete search history.

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(57) **ABSTRACT**

Provided is an excitation light synthesizing unit capable of
emitting, in one direction, excitation light incident from a
plurality of difference directions. The excitation light synthe-
sizing unit includes polarization splitter film (15), first and
second ¼ wavelength plates (13 and 14), and reflection mem-
ber (19). Polarization splitter film (15) transmits excitation
light that is P-polarized light while reflecting excitation light
that is S-polarized light. First and second ¼ wavelength
plates (13 and 14) are arranged on the path along which first
excitation light (L1), which is directed toward polarization
splitter film (15), travels. Reflection member (19) disposed
between first and second ¼ wavelength plates (13 and 14).
Reflection member (19) reflects second excitation light (L2)
incident via polarization splitter film (15) toward polarization
splitter film (15). Reflection member (19) includes hole (20)
formed to pass first excitation light (L1).

10 Claims, 8 Drawing Sheets

