

$p2mg$ 

No. 7

 $p2mg$ 
**Generators selected** (1);  $t(1,0)$ ;  $t(0,1)$ ; (2); (3)

**General position**

 Multiplicity,  
Wyckoff letter,  
Site symmetry

Coordinates

 4  $d$  1

 (1)  $x,y$  (2)  $\bar{x},\bar{y}$  (3)  $\bar{x} + \frac{1}{2},y$  (4)  $x + \frac{1}{2},\bar{y}$ 
**I Maximal translationengleiche subgroups**

[2] $p11g$ (4, $pg$ )	1; 4	$-\mathbf{b}, \mathbf{a}$	
[2] $p1m1$ (3, $pm$ )	1; 3		1/4,0
[2] $p211$ (2, $p2$ )	1; 2		

**II Maximal klassengleiche subgroups**

## • Enlarged unit cell

[2] $\mathbf{b}' = 2\mathbf{b}$			
$p2gg$ (8)	$\langle 2; 3 + (0,1) \rangle$	$\mathbf{a}, 2\mathbf{b}$	
$p2gg$ (8)	$\langle (2; 3) + (0,1) \rangle$	$\mathbf{a}, 2\mathbf{b}$	0, 1/2
$p2mg$ (7)	$\langle 2; 3 \rangle$	$\mathbf{a}, 2\mathbf{b}$	
$p2mg$ (7)	$\langle 3; 2 + (0,1) \rangle$	$\mathbf{a}, 2\mathbf{b}$	0, 1/2
[3] $\mathbf{a}' = 3\mathbf{a}$			
$p2mg$ (7)	$\langle 2; 3 + (1,0) \rangle$	$3\mathbf{a}, \mathbf{b}$	
$p2mg$ (7)	$\langle 2 + (2,0); 3 + (3,0) \rangle$	$3\mathbf{a}, \mathbf{b}$	1,0
$p2mg$ (7)	$\langle 2 + (4,0); 3 + (5,0) \rangle$	$3\mathbf{a}, \mathbf{b}$	2,0
[3] $\mathbf{b}' = 3\mathbf{b}$			
$p2mg$ (7)	$\langle 2; 3 \rangle$	$\mathbf{a}, 3\mathbf{b}$	
$p2mg$ (7)	$\langle 3; 2 + (0,2) \rangle$	$\mathbf{a}, 3\mathbf{b}$	0, 1
$p2mg$ (7)	$\langle 3; 2 + (0,4) \rangle$	$\mathbf{a}, 3\mathbf{b}$	0, 2

## • Series of maximal isomorphic subgroups

[ $p$ ] $\mathbf{a}' = p\mathbf{a}$			
$p2mg$ (7)	$\langle 2 + (2u,0); 3 + (\frac{p}{2} - \frac{1}{2} + 2u,0) \rangle$ prime $p > 2$ ; $0 \leq u < p$ $p$ conjugate subgroups	$p\mathbf{a}, \mathbf{b}$	$u, 0$
[ $p$ ] $\mathbf{b}' = p\mathbf{b}$			
$p2mg$ (7)	$\langle 3; 2 + (0,2u) \rangle$ prime $p > 2$ ; $0 \leq u < p$ $p$ conjugate subgroups	$\mathbf{a}, p\mathbf{b}$	$0, u$

**I Minimal translationengleiche supergroups** none

**II Minimal non-isomorphic klassengleiche supergroups**

## • Additional centring translations

 [2]  $c2mm$  (9)

## • Decreased unit cell

 [2]  $\mathbf{a}' = \frac{1}{2}\mathbf{a}$   $p2mm$  (6)